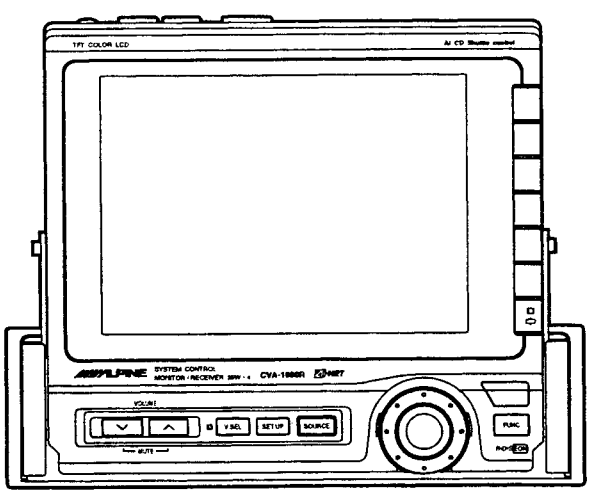
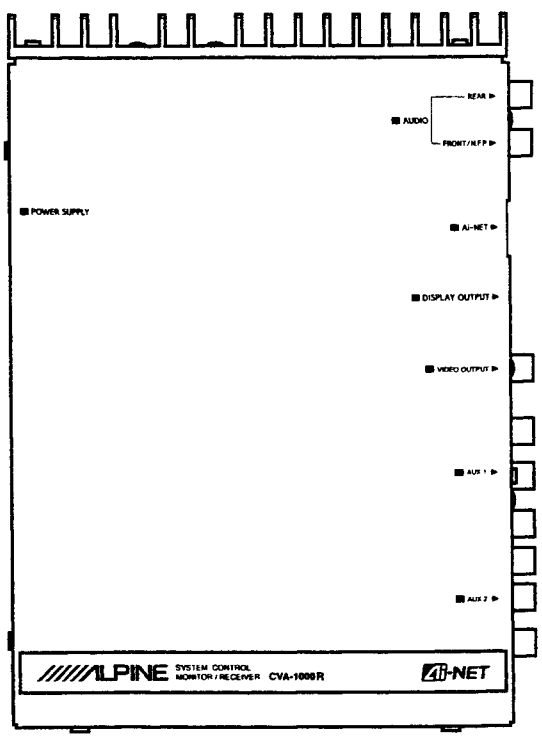
ALPINE

SERVICE MANUAL

System Control Monitor/Receiver

● This model is component system unit of Tuner Unit and Indash Monitor Unit.





CVA-1000R

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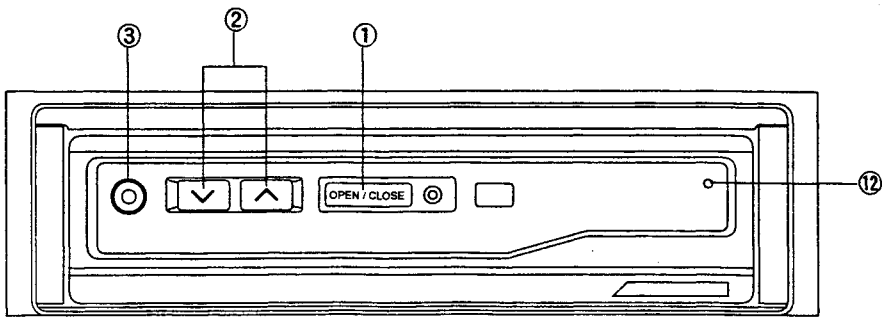
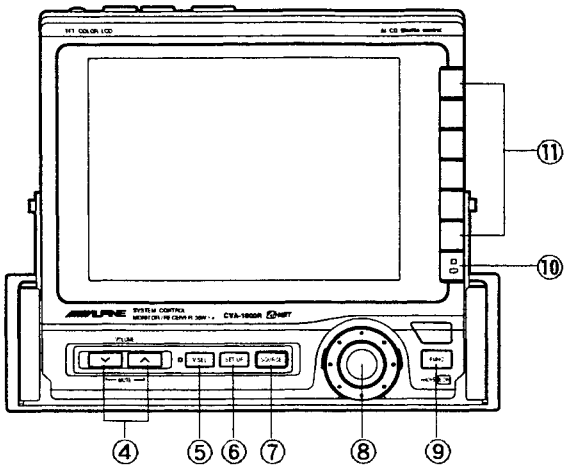
NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Parts Identifications

<Indash Monitor Unit>



(Closed Shuttle)

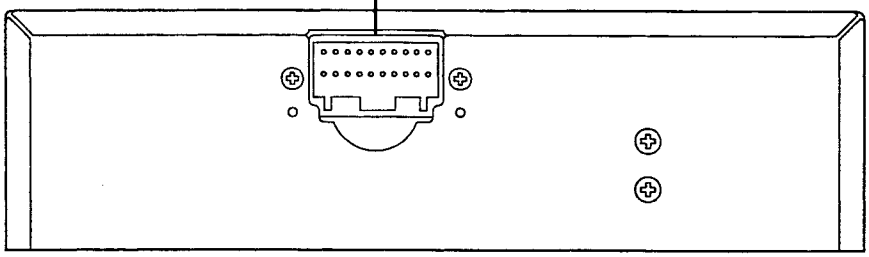


(Opened Shuttle)

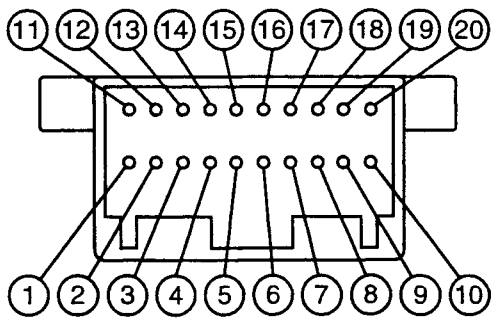
① OPEN/CLOSE Switch
② Closed Shuttle : VOLUME Adjustment Switch
Opened Shuttle : ANGLE Adjustment Switch
③ POWER ON/OFF Switch
④ VOLUME Adjustment Switch
⑤ Visual SELect Switch
⑥ SET UP Switch
⑦ SOURCE Select Switch
⑧ Rotary Encoder Volume
⑨ FUNCtion Switch
⑩ NEXT Switch
⑪ FUNCtion No. Select Switch
⑫ Reset Switch

ET002 : 20P Connector

(Bottom Side)



● ET002 : 20P Connector



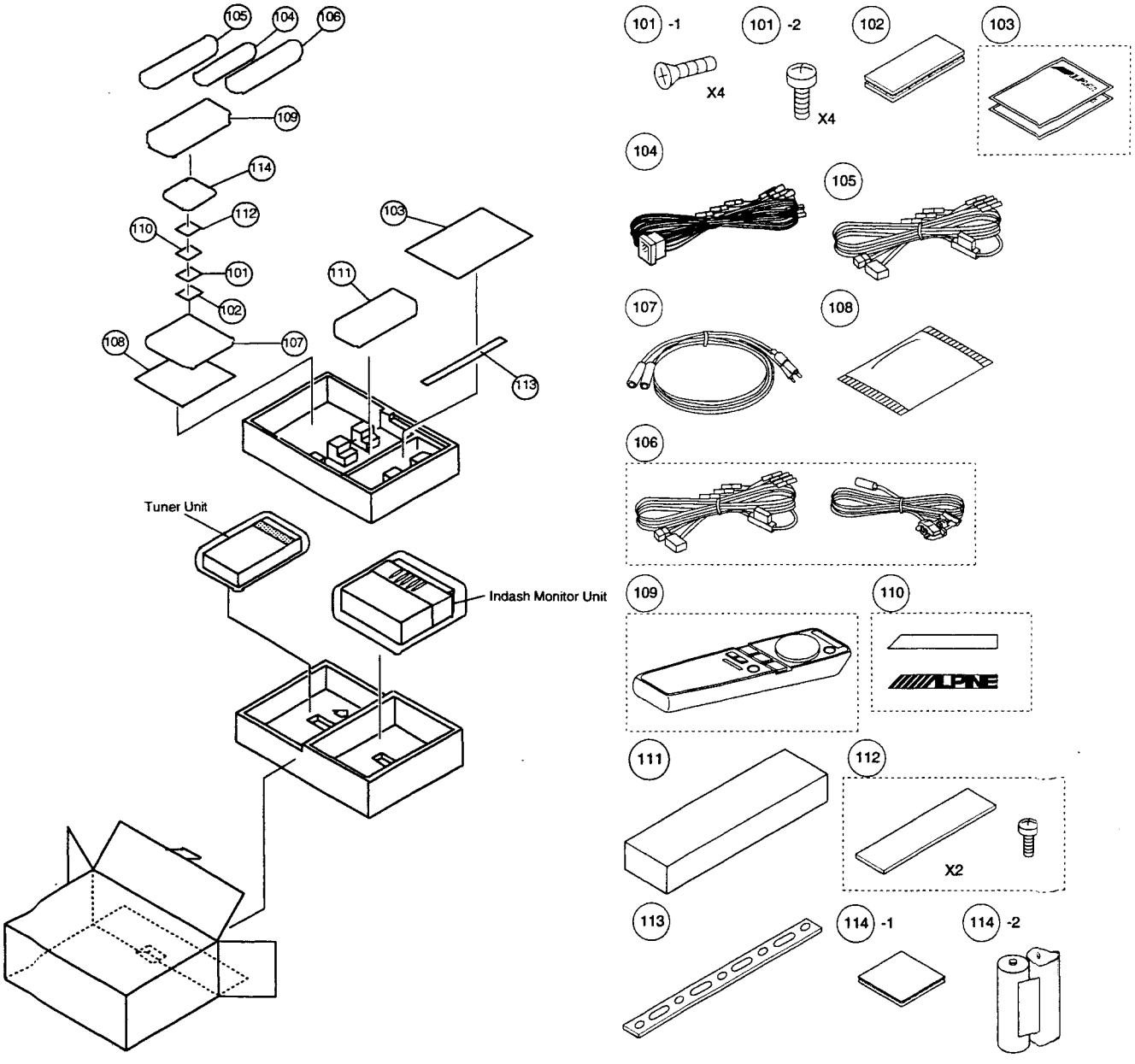
No.	Description	No.	Description
1	VIDEO (B/B)	11	V-GND (B/B)
2	NC	12	NC
3	BUS- (B/B)	13	B-GND (B/B)
4	BUS+ (B/B)	14	ACC. CONT (B/B)
5	D-CONT	15	MOD-CONT
6	G-CONT	16	PARKING
7	REM-OUT	17	DIMMER
8	ACC	18	ACC
9	BATT	19	BATT
10	GND	20	GND

Packing Assembly Parts List

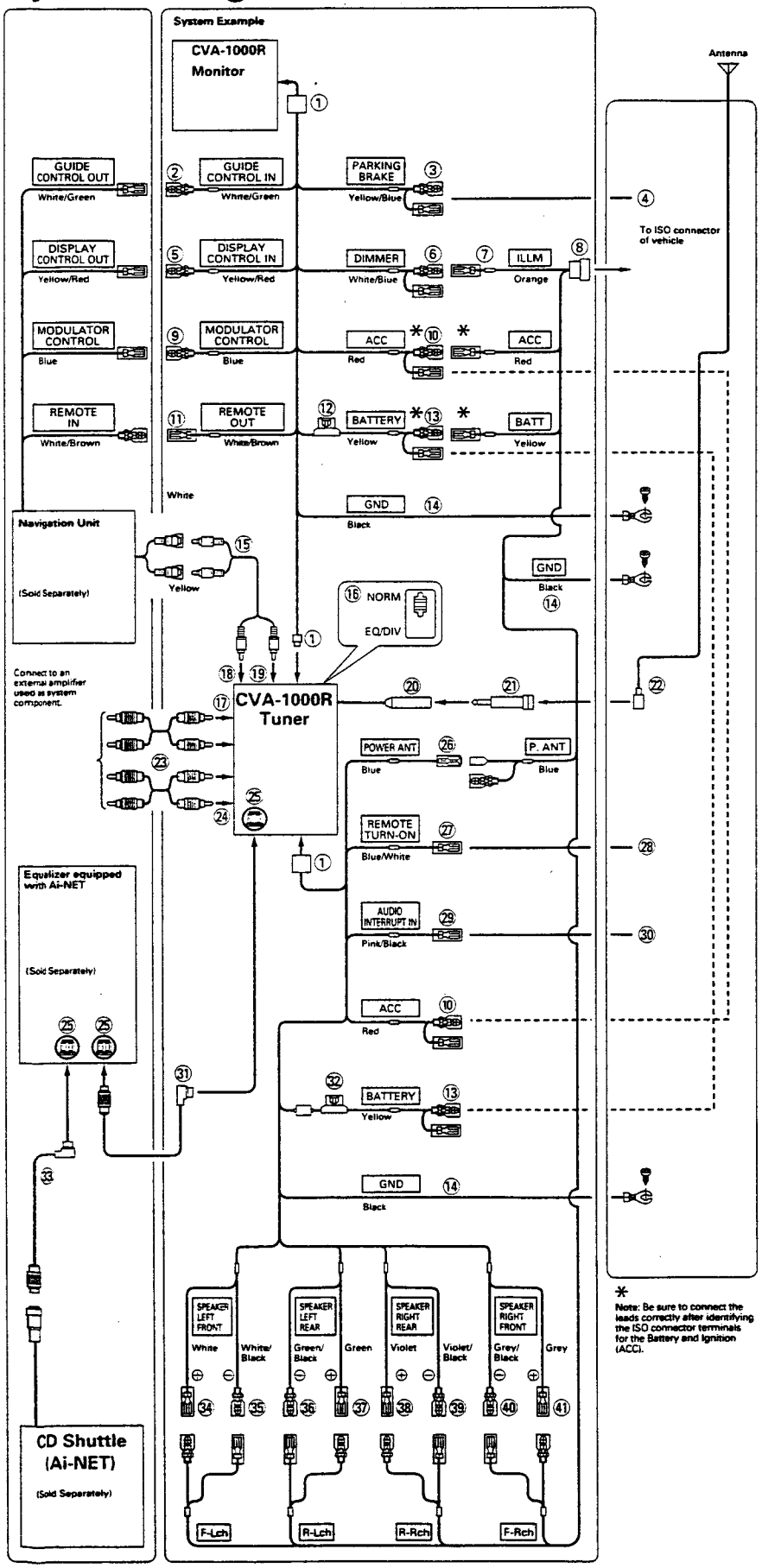
Symbol No.	Part No.	Description
101	01V11300Y79	Assy., Kit Installation
101-1	03S72235F67	Screw, Countersink (M4X6)
101-2	03S72235F69	Screw, Pan (M5X6)
102	75T58346F01	Pad, Magic Tape (25X50)
103-1	68P91508W63	Owner's Manual
103-2	68P91508W64	Owner's Manual I/G/S
104	01T15087Y01	Assy., ISO Connector
105	01T55176W27	Assy., Power Wire (Tuner Unit)
106	01T95205W01	Assy., Power Wire (Monitor Unit)
107	01T95334W02	Assy., Main Antenna Wire

Symbol No.	Part No.	Description
108	75T75499W02	Felt, Sheet
109	01T75436W01	Unit, Remote Control
110	33A10177Y01	Assy., Name Plate
111	15B10176Y01	Assy., Nose Cover
112	75A10178Y01	Assy., Kit Cushion
113	07B64552F01	Bracket, Strap Receiver
114	01V11500Y09	Assy., Kit Remote Control
114-1	75T75507W01	Pad, Magic Tape (25X28)
114-2	60T55630W01	Battery, MGN R03 (NB) UM-4

Packing Method View



System Diagram



Connections

① **Power Supply Connector**
② **Guide Control Input Lead (White/Green)**
Connect to the guide control output lead.

③ **Parking Brake Lead (Yellow/Blue)**
Connect to illumination lead.

④ Connect this lead to the parking brake lead powered when parking brake is pulled.

⑤ **Display Control Input Lead (Yellow/Red)**
Connect to the display control output lead.

⑥ **Dimmer Input Lead (White/Blue)**
Connect to illumination lead.
⑦ **Illumination Lead (Orange)**
⑧ **ISO Connector (Included)**
⑨ **Modulator Control Input Lead (Blue)**
Connect to the modulator control output lead.

⑩ **Switched Power Lead (Ignition) (Red)**
Connect this lead to an open terminal on the vehicle's fuse box or another unused power source which provides (+) 12V only when the ignition is turned on or in the accessory position.

⑪ **Remote Control Output Lead (White/Brown)**
Connect this lead to the remote control input lead. This lead outputs the controlling signals from the remote control.

⑫ **Fuse Holder (5A)**
⑬ **Battery Lead (Yellow)**
Connect this lead to the positive (+) post of the vehicle's battery.
⑭ **Ground Lead (Black)**
Connect this lead to a good chassis ground on the vehicle. Make sure the connection is made to bare metal and is securely fastened using the sheet metal screw provided.
⑮ **RCA Extension Cable (Included with Navigation)**
⑯ **System Switch**
When connecting an equalizer or divider using Ai-NET feature, place this switch in the EQ/DIV position. When no device is connected, leave the switch in the NORM position.

NOTE:
Be sure turn the power off to the unit before changing the switch position.

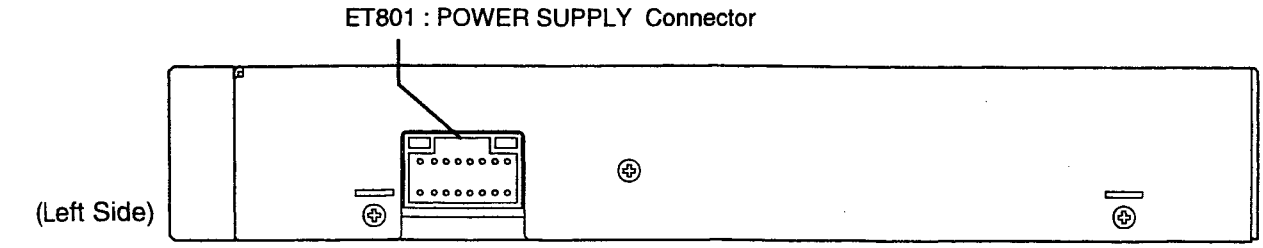
⑰ **Front Output Connectors**
⑱ **To Video input terminal**
⑲ **To Audio input terminal**
⑳ **Antenna Receptacle**
Connect to ISO antenna converter plug supplied.
㉑ **ISO Antenna Converter Plug (Included)**
㉒ **ISO Antenna Plug**
㉓ **RCA Extension Cable (Sold Separately)**
㉔ **Rear Output Connectors**
㉕ **Ai-NET Connector**
Connect this to the output or input connector of other product equipped with Ai-NET.

㉖ **Power Antenna Lead (Blue)**
Connect this lead to the +B terminal of your power antenna, if applicable.

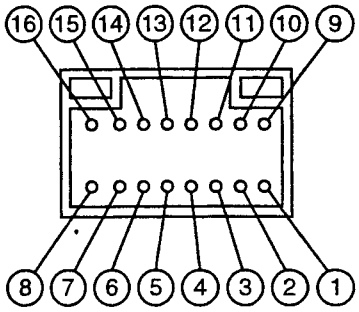
㉗ **Remote Turn-On Lead (Blue/White)**
Connect this lead to the remote turn-on lead of your amplifier or signal processor.

㉘ **To amplifier or equalizer**
㉙ **Audio Interrupt In Lead (Pink/Black)**
㉚ **To vehicle phone**
㉛ **Ai-NET Cable (Included with Equalizer)**
㉜ **Fuse Holder (10A)**
㉝ **Ai-NET Cable (Included with CD Shuttle)**
㉞ **Left Front (+) Speaker Output Lead (White)**
㉟ **Left Front (–) Speaker Output Lead (White/Black)**
㊱ **Left Rear (–) Speaker Output Lead (Green/Black)**
㊲ **Left Rear (+) Speaker Output Lead (Green)**
㊳ **Right Rear (+) Speaker Output Lead (Violet)**
㊴ **Right Rear (–) Speaker Output Lead (Violet/Black)**
㊵ **Right Front (–) Speaker Output Lead (Grey/Black)**
㊶ **Right Front (+) Speaker Output Lead (Grey)**

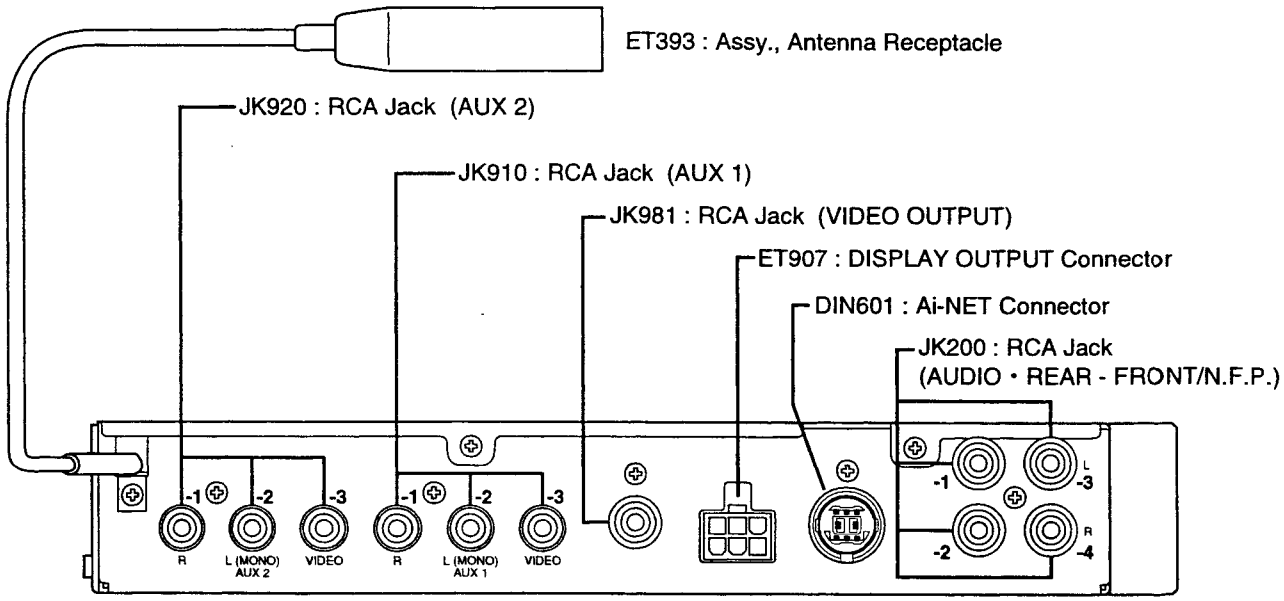
<Tuner Unit>



● ET801 : POWER SUPPLY Connector



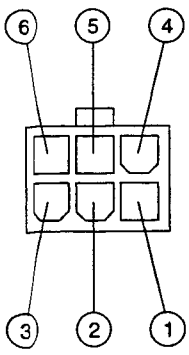
No.	Description	No.	Description
1	ACC	9	P. ANT
2	IN INT	10	O. REM
3	NC	11	NC
4	FRONT R+	12	REAR R+
5	FRONT R–	13	REAR R–
6	FRONT L+	14	REAR L+
7	FRONT L–	15	REAR L–
8	GND	16	BATT



(Right Side)

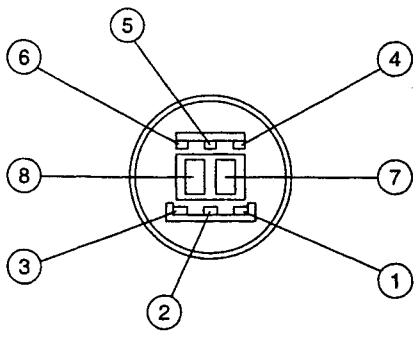
● JK200 (–1 : FRONT/N.F.P. L, –2 : FRONT/N.F.P. R, –3 : REAR L, –4 : REAR R)

● ET907 : DISPLAY OUTPUT Connector



No.	Description
1	BUS–
2	GND
3	ACC
4	BUS+
5	GND
6	V-OUT 1

● DIN601 : Ai-NET Connector



No.	Description
1	ACC
2	BUS–
3	BUS+
4	AUDIO-R
5	AUDIO-G
6	AUDIO-L
7	BATT
8	GND

CVA-1000R

Specifications

FM RADIO

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Mono, 3% Dist., at 98.1MHz)	23.2dBf
-3dB Limiting Sensitivity (at 98.1MHz)	20.2dBf
Residual Noise (Ref. 400Hz, at 98.1MHz)	25±5dB
S/N Ratio (Stereo, at 98.1MHz)	56dB
Image Rejection (at 106.1MHz)	40dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 60dB μ, at 98.1MHz)	1%
Frequency Response (Ref. 400Hz, PRE. EMP-OFF, at 98.1MHz)	100Hz : 0±3dB
	10kHz : -12±3dB
Stereo Separation (1kHz, at 98.1MHz)	20dB
PS Sensitivity (at 98.1MHz)	36.2dBf
TP Sensitivity (at 98.1MHz)	36.2dBf
Quieting Sensitivity (Mono, 50dB S/N, at 98.1MHz)	22.2dBf

MW RADIO

Intermediate Frequency	450kHz
Frequency Range	531~1,602kHz
Usable Sensitivity (20dB S/N, at 999kHz)	38dB
S/N Ratio (at 999kHz)	44dB
Image Rejection (at 1,404kHz)	50dB
IF Rejection (at 603kHz)	60dB
Distortion (at 999kHz)	1.5%
Frequency Response (Ref. 400Hz, at 999kHz)	100Hz : -3±4dB
	4kHz : -12+6, -12dB

LW RADIO

Intermediate Frequency	450kHz
Frequency Range	153~281kHz
Usable Sensitivity (20dB S/N)	at 162kHz : 43dB
	at 216kHz : 41dB
	at 270kHz : 41dB
S/N Ratio (at 216kHz)	42dB
Image Rejection (at 270kHz)	40dB
IF Rejection (at 162kHz)	50dB
Distortion (at 216kHz)	1.5%
Frequency Response (Ref. 400Hz, at 216kHz)	100Hz : -3±4dB
	4kHz : -12+6, -12dB

GENERAL

Power Supply	DC14.4V
Power Output (T.H.D. 10%)/Impedance	13W/ch/4ohm
Semiconductors	34IC's, 49Transistors, 22Diodes, 7Zener Diodes
Dimensions (W×H×D)	156.1×35×225.1mm
Weight	1.1kg

Note : Due to Continuing product improvement, specifications and designs are subject to change without notice.

●Tuner Unit

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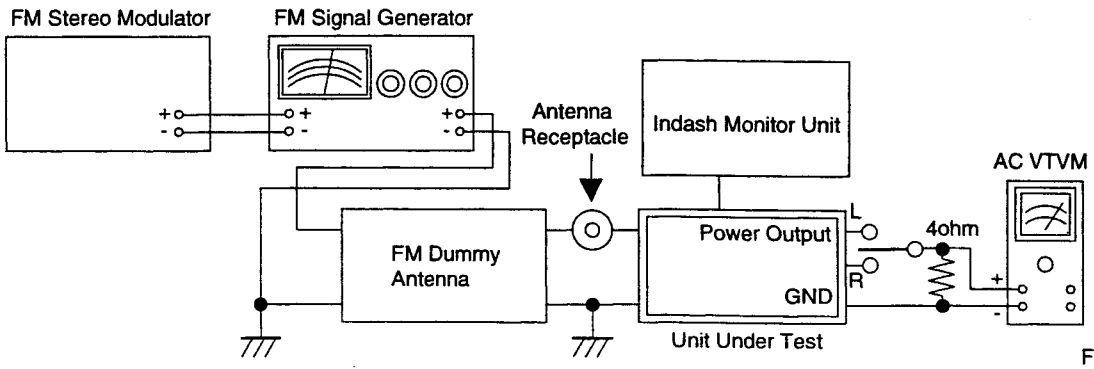
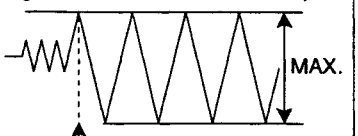


Figure 6

(3) Control Settings (Indash Monitor Unit)

Power Switch	ON	Bass Control	Center Position
Fader Control	Front Position	Band Switch	FM
Balance Control	Center Position	Others	OFF
Treble Control	Center Position		

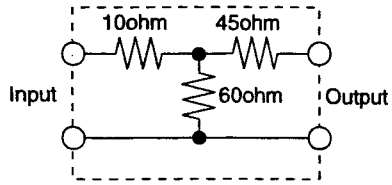
(4) Adjustment Procedures

Step	Description		Connection	Signal Generator	Dial Control	Test Point / P.W.Board Coordinates	Adjustment
1	IF Adjustment		Figure 2	98.1MHz, 72dBμ (Mod. 400Hz, Dev. 40KHz)	98.1MHz	T.P.380 (2-G) T.P.381 (2-G)	Adjust L2101 to 0±15mV.
2	Signal Meter Adjustment		Figure 3	98.1MHz, 46dBμ (Mod. 400Hz, Dev. 40KHz)	98.1MHz	T.P.382 (2-G)	Adjust VR2101 to 3.5±0.5V.
3	Seek Stop Adjustment		Figure 4	98.1MHz, 27dBμ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	T.P.385 (2-G) T.P.386 (2-G)	T.P.385 Low Level. Adjust VR2104 for the waveform changing to maximum output. Figure : Waveform of T.P.386 output.  Stop the adjust VR2104 at this time.
4	Noise Level Adjustment	(1)	Figure 5	98.1MHz, 72dBμ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	Power Output	Adjust VOLUME to obtain 1W output. This value is 0dB.
		(2)	Figure 5	98.1MHz, -20dBμ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	Power Output	Adjust VR2105 to 25±5dB output at SG level minimum.
5	Stereo Blend Adjustment (Lch)		Figure 6	98.1MHz, 40±3dBμ (Stereo, 1kHz, Lch only)	98.1MHz	Power Output	Adjust VR2102 for Lch and Rch output level difference to be 10dB.

Adjustment Procedures

1. FM SECTION

(1) Dummy Antenna Circuit



For 50 ohm FM Signal Generator Figure 1

(2) Connections

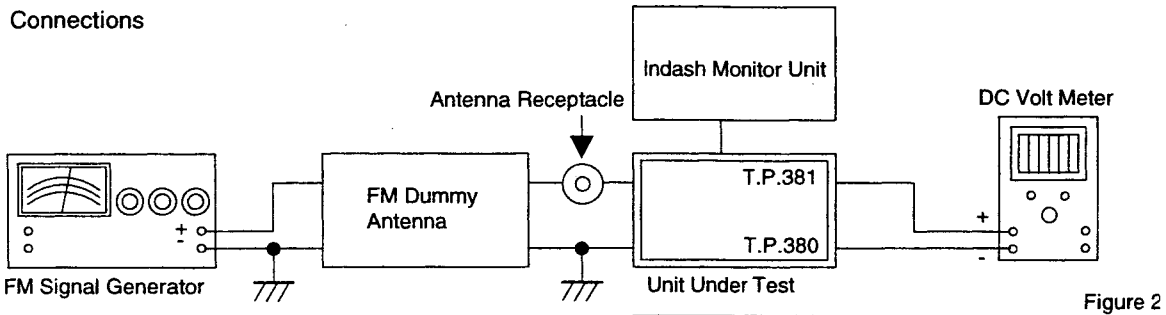


Figure 2

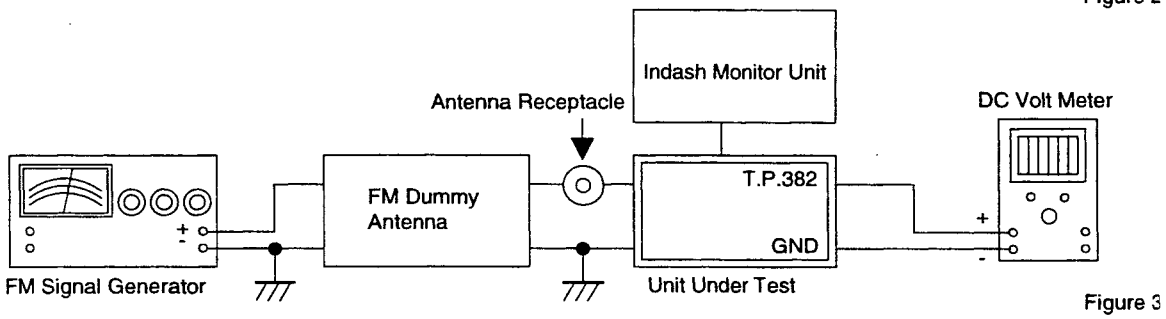


Figure 3

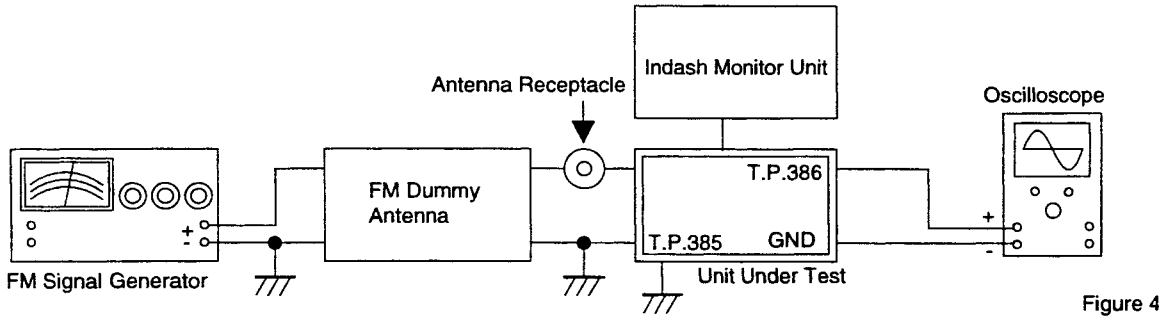


Figure 4

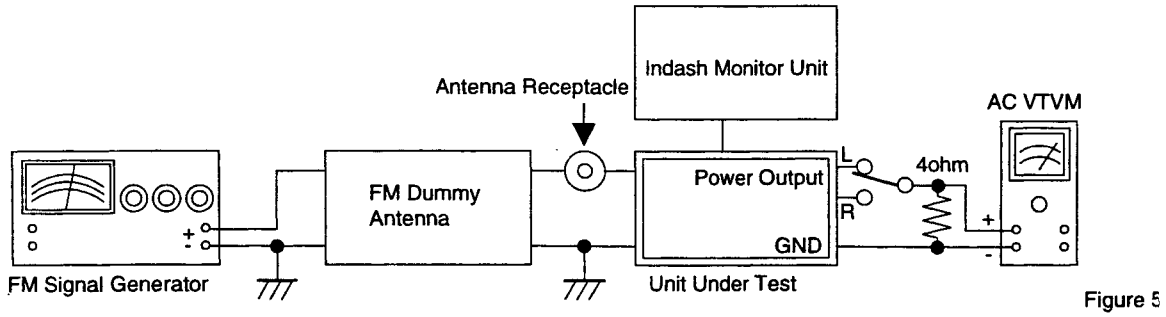
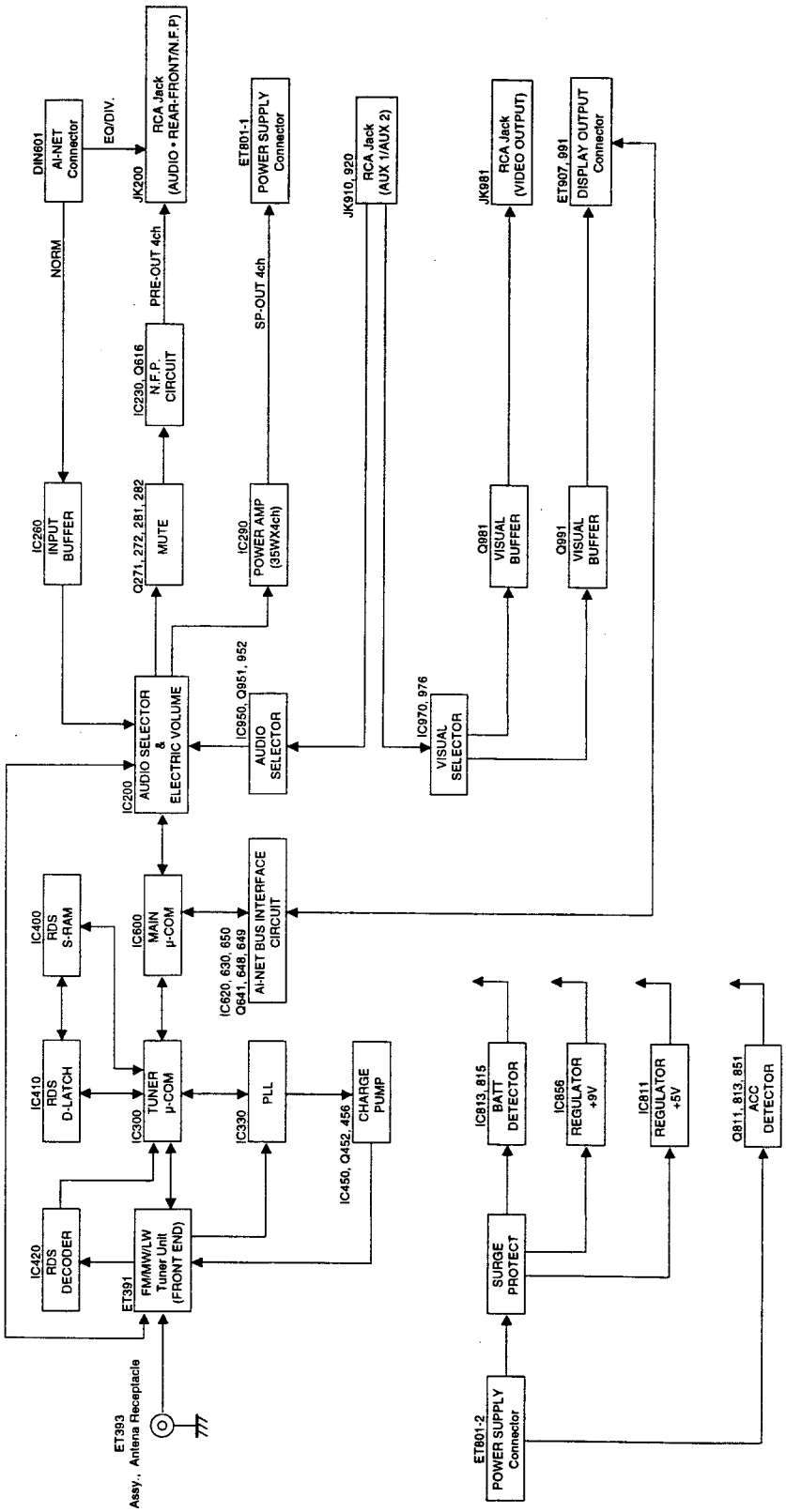


Figure 5

Block Diagram



Step	Description	Connection	Signal Generator	Dial Control	Test Point / P.W.Board Coordinates	Adjustment
6	Stereo Blend Adjustment (Rch)	Figure 6	98.1MHz, 40±3dBμ (Stereo, 1kHz, Rch only)	98.1MHz	Power Output	Proceed same adjustment under step 5.
7	Stereo Separation Adjustment (Lch)	Figure 6	98.1MHz, 72dBμ (Stereo, 1kHz, Lch only)	98.1MHz	Power Output	Adjust VR2103 for Rch output to be minimum and confirm Lch and Rch output level difference is more than 20dB.
8	Stereo Separation Adjustment (Rch)	Figure 6	98.1MHz, 72dBμ (Stereo, 1kHz, Rch only)	98.1MHz	Power Output	Proceed same adjustment under step 7 by alternating Lch and Rch.

Adjustment Locations

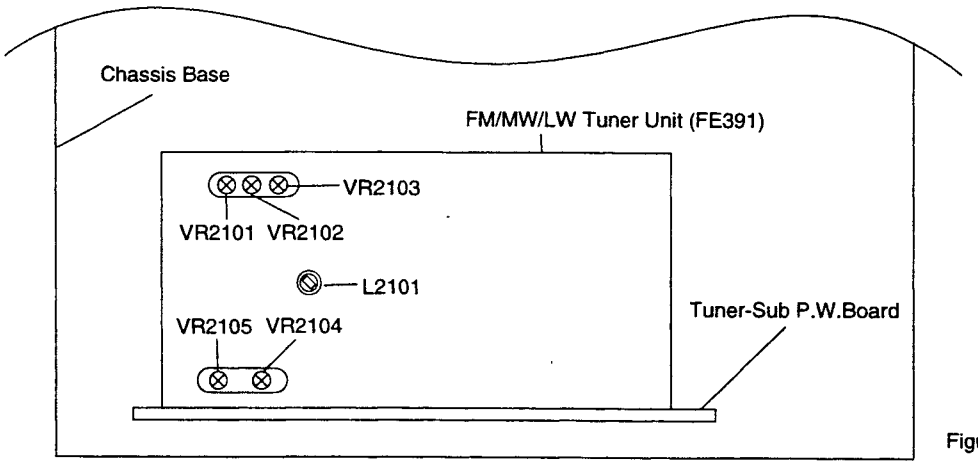
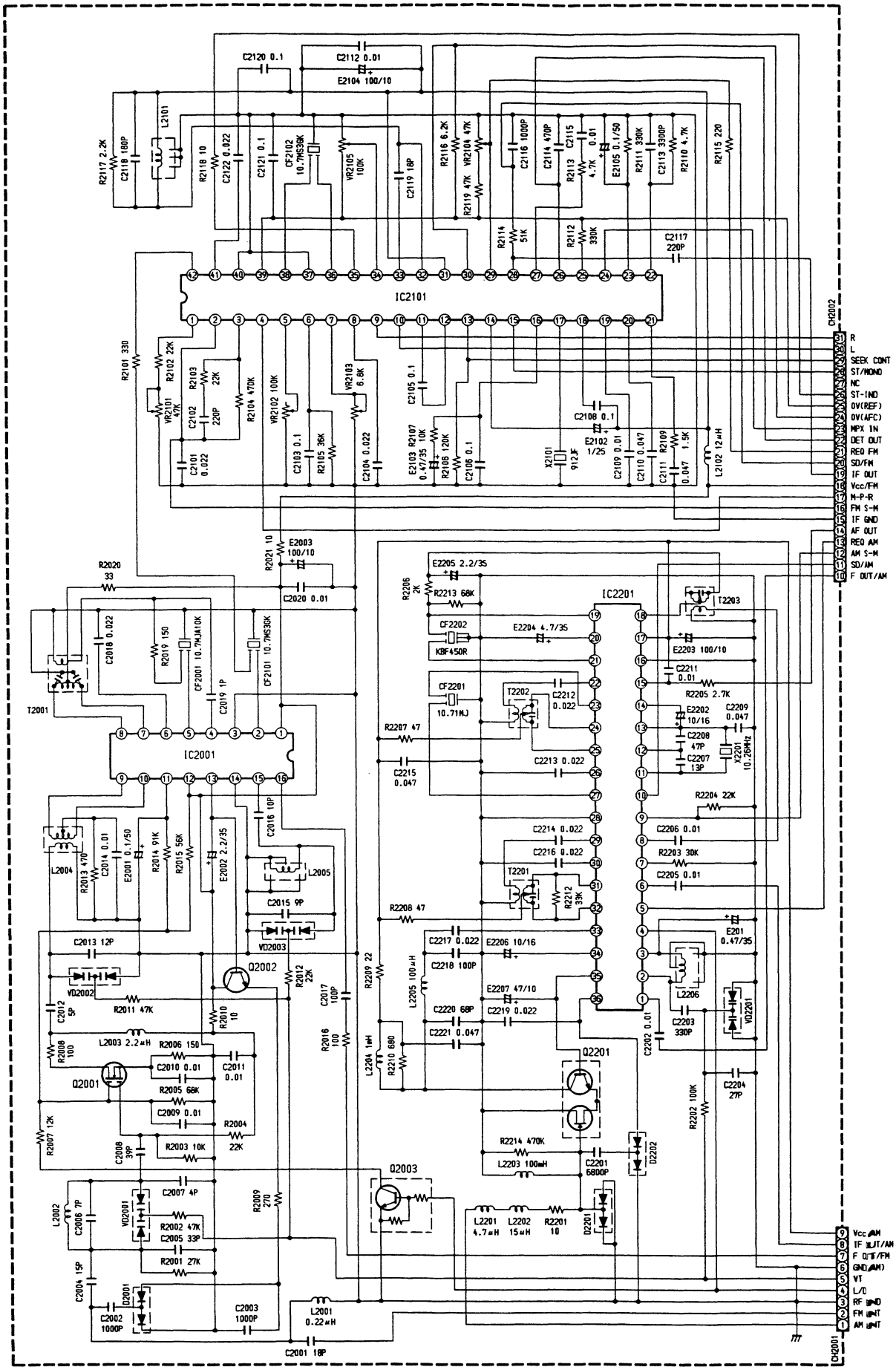


Figure 7

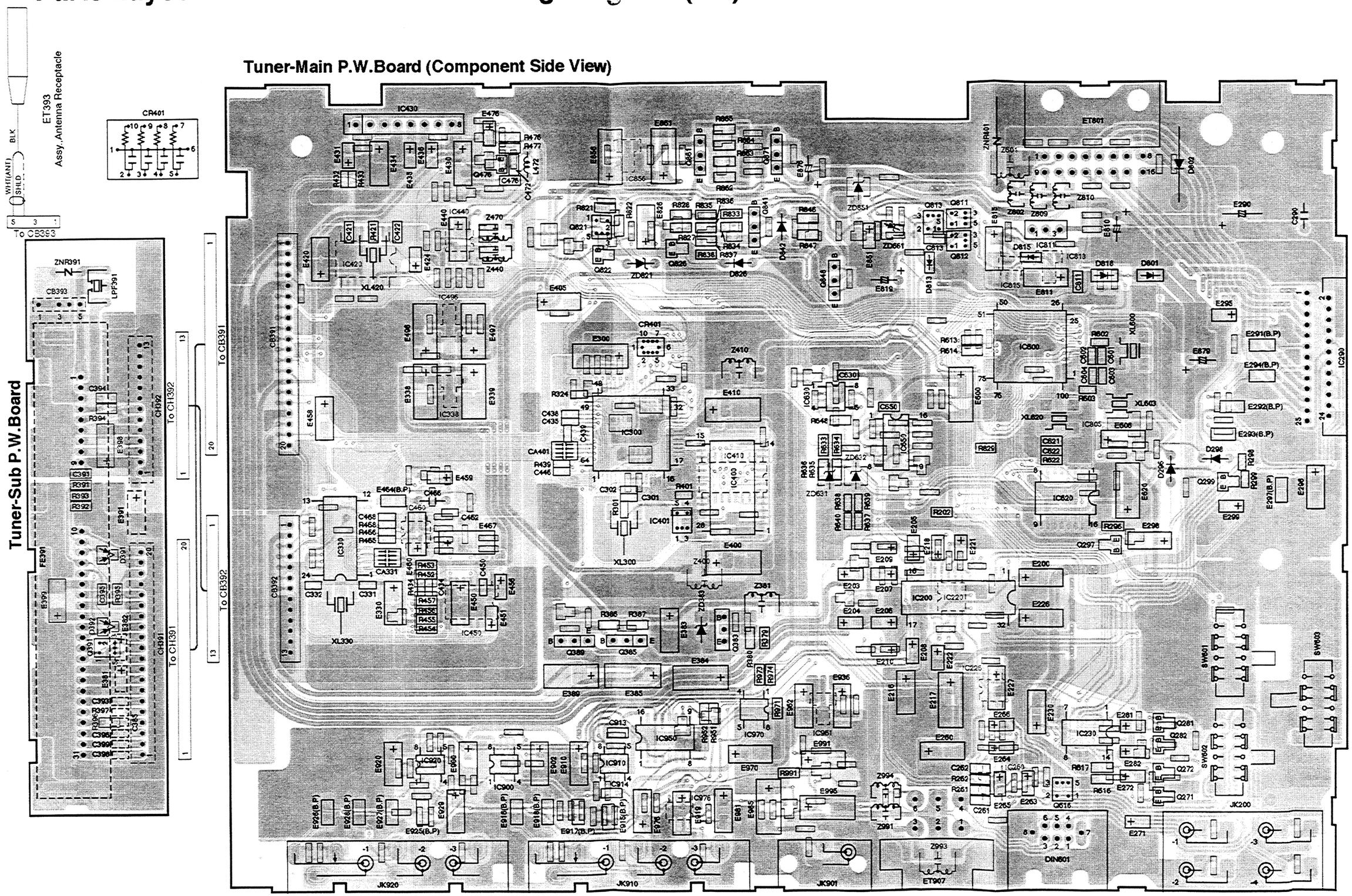
NOTE : For the Adjustment parts and Test Points , refer to the Parts Layout on P.W.Boards and Wiring Diagram.

Tuner Schematic Diagram



Parts Layout on P.W.Boards and Wiring Diagram (1/2)

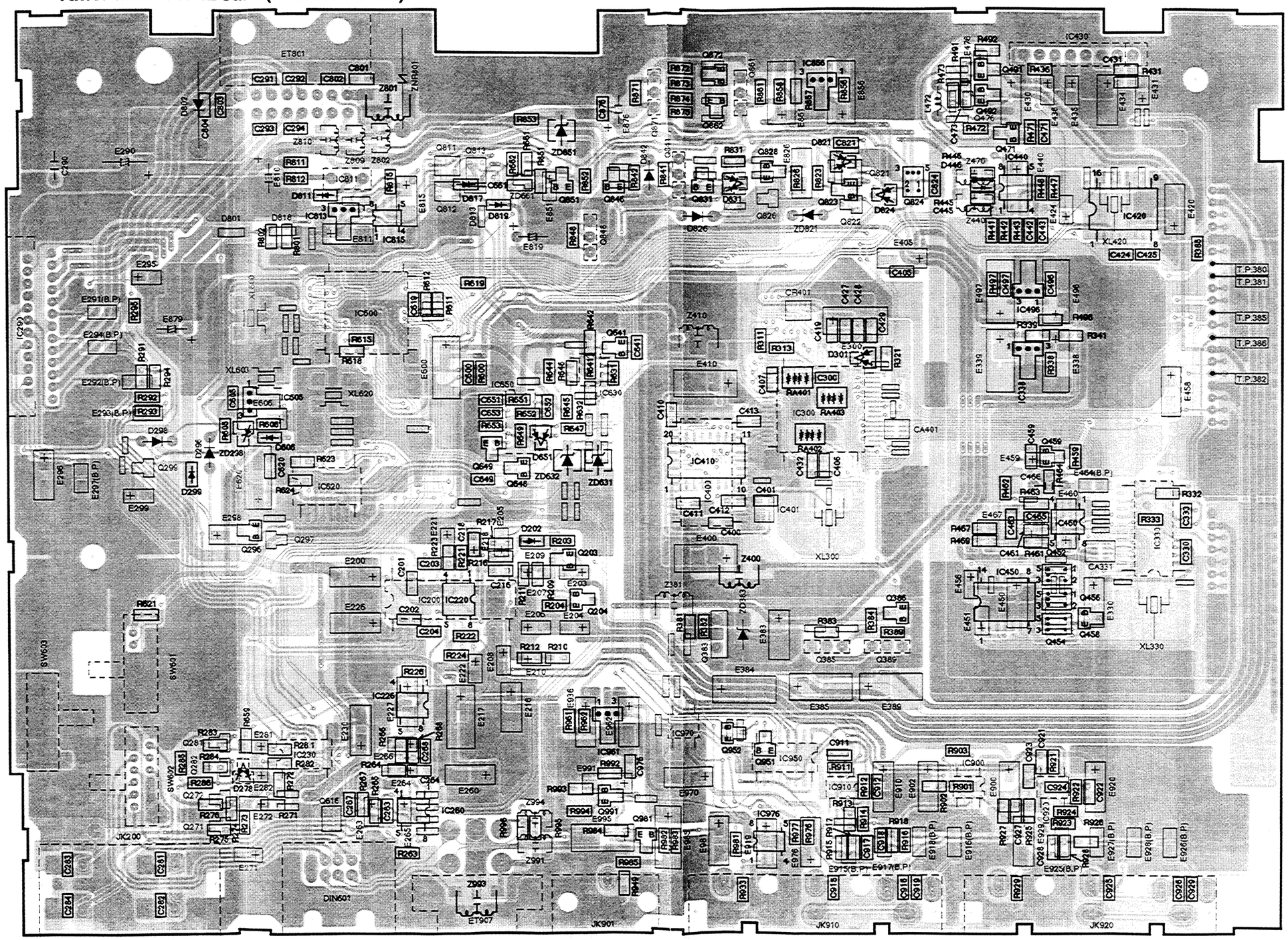
Tuner-Main P.W.Board (Component Side View)



Orange Color Pattern :Component Side Pattern
Blue Color Pattern :Foil Side Pattern

Parts Layout on P.W.Boards and Wiring Diagram (2/2)

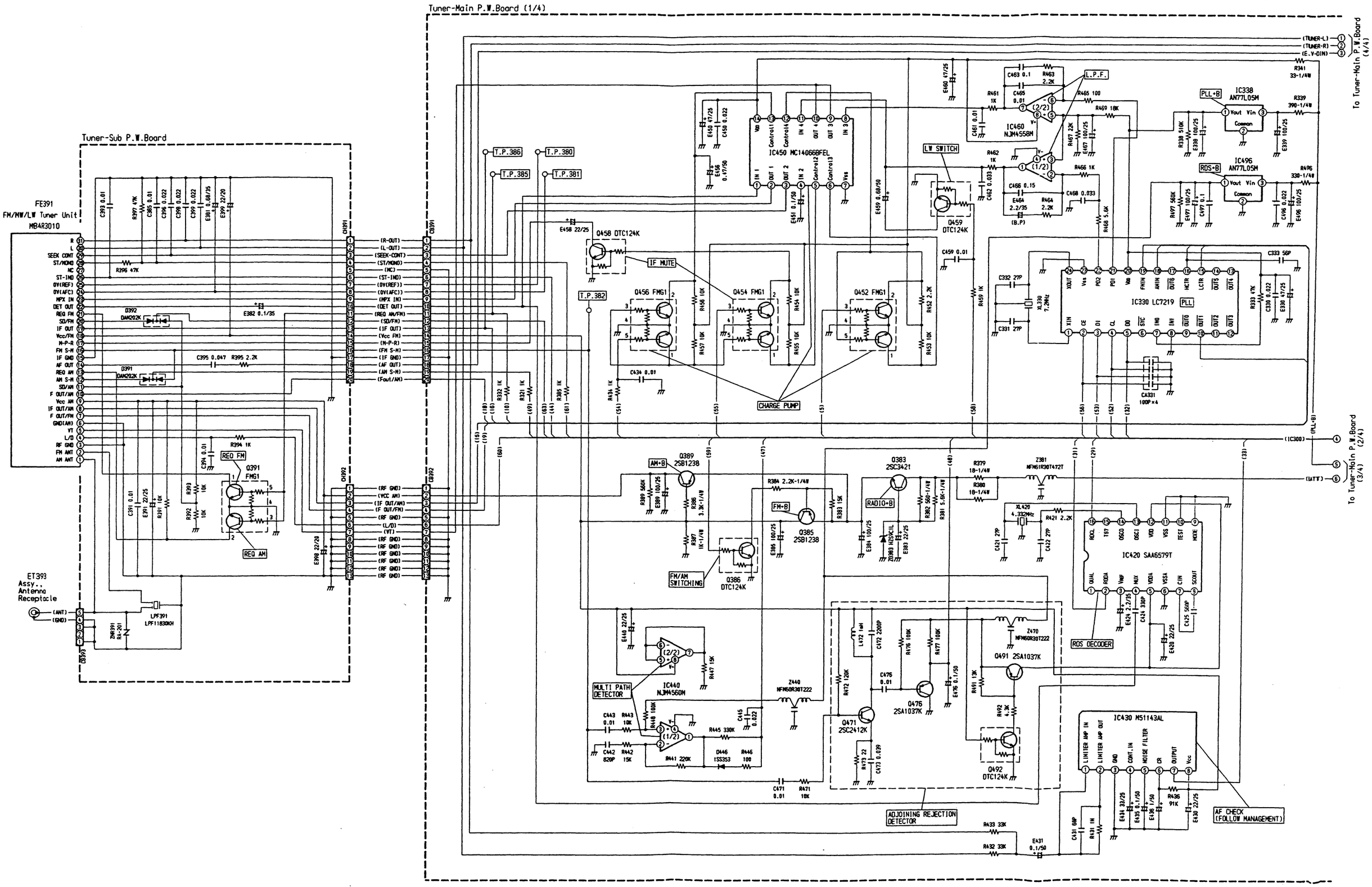
Tuner-Main P.W.Board (Foil Side View)



Orange Color Pattern :Component Side Pattern
Blue Color Pattern :Foil Side Pattern

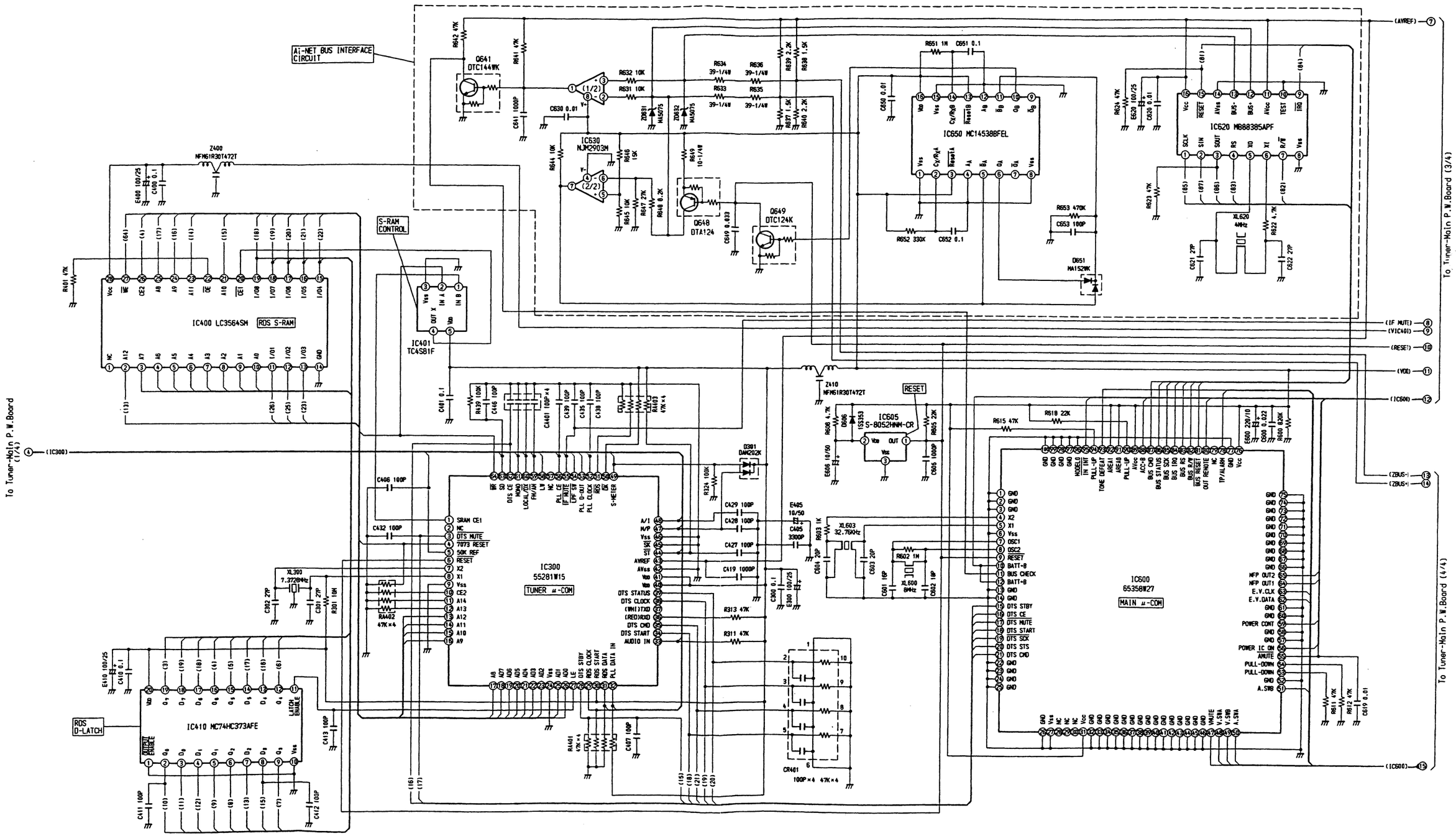
Schematic Diagram (1/4)

CVA-1000R



Schematic Diagram (2/4)

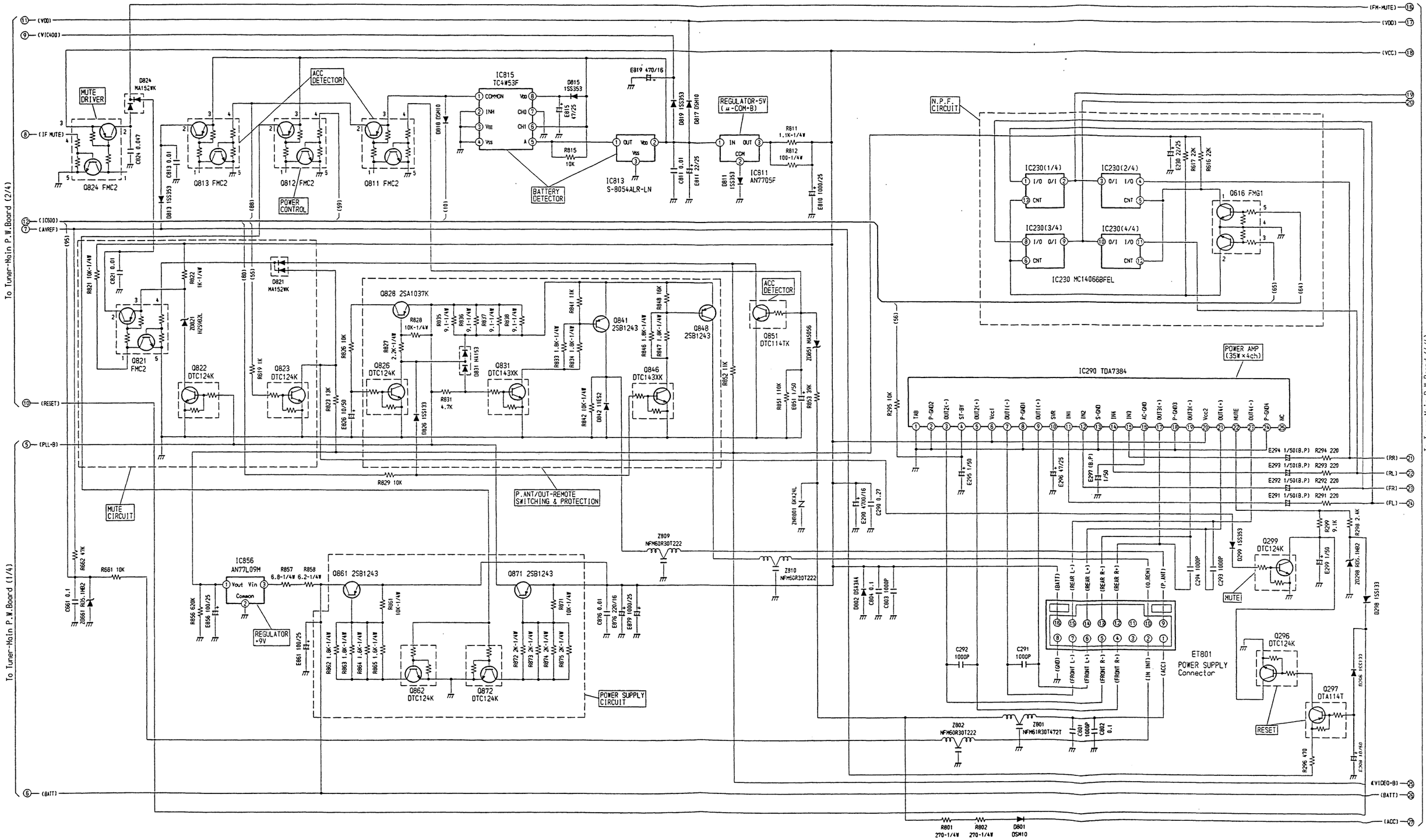
To Tuner-Main P.W.Board (2/4)



Schematic Diagram (3/4)

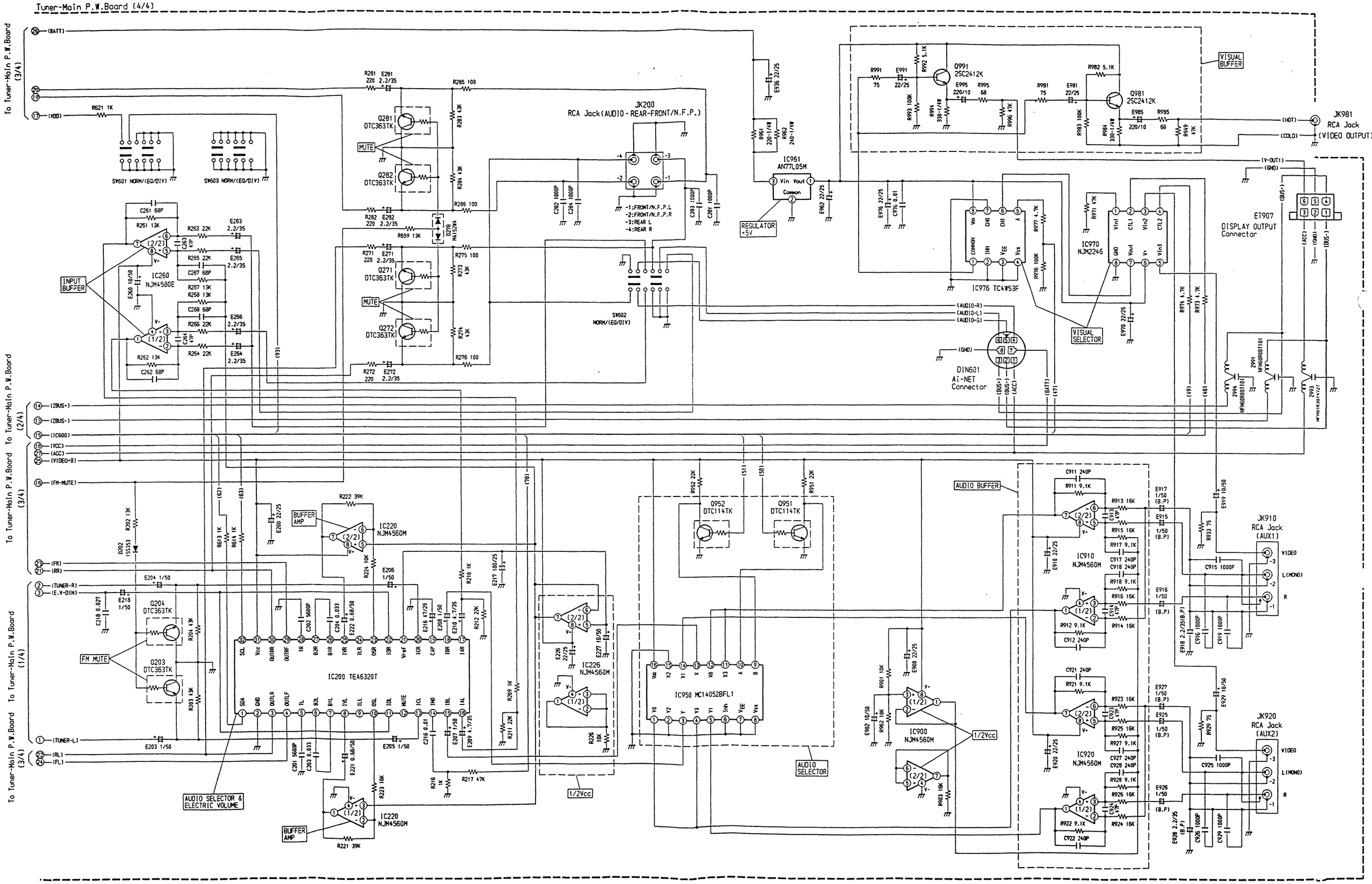
CVA-1000R

Tuner-Main P.W.Board (3/4)



CVA-1000R

Schematic Diagram (4/4)



Terminal Voltage of IC/TR

IC200

1	4.8V
2	35.7mV
3–11	4.5V
12	8.8V
13–18	4.5V
19	8.8V
20–30	4.5V
31	8.8V
32	4.8V

IC220

1–3	4.5V
4	35.6mV
5–7	4.5V
8	8.9V

IC226

1–3	4.5V
4	35.2mV
5–7	NC
8	8.8V

IC230

1	—
2	2.6V
3	2.1V
4	2.3V
5	46.7mV
6	8.8V
7	35.4mV
8–11	—
12	46.6mV
13, 14	8.8V

IC260

1–3	4.5V
4	35.6mV
5–7	4.5V
8	8.9V

IC338

1	9.9V
2	100mV
3	5V

IC401

1	4.9V
2	5V
3	120mV
4	4.9V
5	5V

IC300

1	470mV	24, 25	4V	47	—
2	NC	26	173mV	48	4V
3–6	5V	27	115mV	49	530mV
7, 8	2.4V	28	2.6V	50, 51	5V
9	114mV	29	5V	52	116mV
10	5V	30	2.7V	53	115mV
11	2.6V	31, 32	120mV	54	5V
12	2.8V	33	316mV	55, 56	115mV
13	—	34	115mV	57	NC
14	2.8V	35	4.9V	58	115mV
15	2.9V	36	—	59	5V
16	360mV	37	5V	60, 61	115mV
17	2.6V	38	3.2V	62	5V
18, 19	3.8V	39–41	5V	63	115mV
20	3.9V	42	115mV	64	5V
21, 22	4V	43, 44	5V		
23	115mV	45, 46	114mV		

IC400

1	NC	15	4V
2	4.9V	16, 17	3.9V
3	3.8V	18	3.8V
4	2.3V	19	—
5	2V	20	4.8V
6	3.3V	21	3V
7, 8	1.6V	22	120mV
9	1.9V	23	2.6V
10	3V	24	380mV
11, 12	4V	25	2.6V
13	3.9V	26, 27	5V
14	120mV	28	5.2V

IC410

1	120mV	11	158mV
2	3V	12	3.3V
3	3.8V	13, 14	3.8V
4	3.7V	15	2V
5	1.9V	16	2.3V
6	1.6V	17	3.8V
7	3.6V	18	4.2V
8	3.8V	19	3.8V
9	1.6V	20	5V
10	100mV		

IC420

1	NC	8	2.6V
2	2.8V	9–11	100mV
3	2.6V	12	5V
4	2.5V	13	2.3V
5	5V	14	2.6V
6	100mV	15	NC
7	2.5V	16	2.6V

IC430

1	1.6V
2	1.5V
3	100mV
4	1.8V
5	1.7V
6	8.5V
7	4.9V
8	8.9V

IC440

1–3	5V
4	100mV
5–7	8.1V
8	8.9V

IC450

1, 2	2.4V	8–10	2.2V
3, 4	2.8V	11	10.5V
5, 6	13.9V	12	165mV
7	100mV	13, 14	13.9V

IC460

1	10.5V
2, 3	2.8V
4	100mV
5, 6	2.8V
7	2.2V
8	13.9V

IC496

1	12V
2	100mV
3	5V

IC605

1	4.8V
2	4.8V
3	35.4mV

IC600

1	35.9mV	20	—	45	35.7mV	77	7mV
2	35.8mV	21	36.3mV	46	35.6mV	78	13.3mV
3	35.9mV	22–24	—	47	40.5mV	79	NC
4	1.3V	25	35.8mV	48, 49	4.8V	80	13.2mV
5	1.5V	26	35.8mV	50, 51	4.7V	81	4.8V
6	36.1mV	27	35.9mV	52	35.6mV	82	1.6V
7	2.3V	28–30	NC	53	4.8V	83	4.7V
8	2.5V	31	4.8V	54	41.6mV	84, 85	4.8V
9	4.8V	32	1.5V	55	41.7mV	86	39.3mV
10	5.2V	33	1.7V	56	2.9V	87	41.3mV
11	30.7mV	34	35.7mV	57	35.6mV	88	5.5V
12	5.2V	35	1.7V	58	20.2mV	89–91	4.8V
13, 14	7.1mV	36, 37	38.6mV	59	4.8V	92	35.8mV
15	7.6mV	38, 39	35.6mV	60–62	35.6mV	93	35.2mV
16	4.8V	40, 41	35.7mV	63, 64	4.8V	94	4.8V
17	0.8V	42	—	65	42.3mV	95	5.3V
18	—	43	35.7mV	66–75	35.6mV	96–100	35.6mV
19	4.8V	44	35.6mV	76	4.8V		

IC620

1	4.8V	9	5.4V
2	4.1V	10	35.5mV
3	39.2mV	11	5.5V
4	4.8V	12	2.1V
5	—	13	3.2V
6	3.5V	14	—
7	4.8V	15	4.8V
8	35.5mV	16	5.5V

IC650

1	35.7mV	9	4.8V
2	4.7V	10	7.1mV
3	4.8V	11	4.5V
4	35.8mV	12	7.1mV
5	4.7V	13	4.8V
6	35.7mV	14	4.3V
7	4.8V	15	7.1mV
8	35.7mV	16	4.8V

IC630

1	2.8V
2	2.1V
3	3.2V
4	7.1mV
5	1.9V
6	1.6V
7	4.7V
8	4.8V

IC811

1	5.6V
2	0.6V
3	8.9V

IC813

1	5.6V
2	5.6V
3	8.8mV

IC900

1–3	4.4V
4	35.7mV
5–7	NC
8	8.8V

IC950

1	4.4V
2	35.7mV
3	4.4V
4	35.7mV
5	4.4V
6–8	35.7mV
9	41.2mV
10	—
11	35.8mV
12–14	4.4V
15	35.8mV
16	8.8V

IC970

1	2.1V
2	3.9V
3	2.1V
4	3.9V
5	2.1V
6	4.9V
7	1.8V
8	35.6mV

IC976

1–4	35.7mV
5	40.6mV
6	1.5V
7	35.7mV
8	4.9V

IC856

1	8.8V
2	35.1mV
3	13.8V

IC910, 920

1–3	4.4V
4	35.7mV
5–7	4.4V
8	8.8V

	E	C	B		E	C	B		E	C	B
Q281	0.9V	35.4mV	35.6mV	Q491	8.1V	—	4.4V	Q848	14.2V	13.5V	14.2V
Q282	0.9V	35.4mV	35.6mV	Q492	110mV	121mV	8.9V	Q851	35.3mV	57.6mV	1.7V
Q283	0.9V	7.2mV	7.2mV	Q641	35.6mV	59.2mV	2.9V	Q861	14.3V	13.6V	14.3V
Q284	0.9V	7.1mV	7.3mV	Q648	4.8V	2.1V	4.8V	Q862	35mV	0.6mV	5.5V
Q383	9V	13.1V	9.6V	Q649	35.6mV	4.8V	35.5mV	Q871	14.3V	13.6V	14.3V
Q385	8.9V	8.9V	8.3V	Q822	8mV	7.1mV	12.3V	Q872	35.1mV	0.3V	5.5V
Q386	110mV	160mV	5V	Q823	35.6mV	4.5V	41.6mV	Q951	35.9mV	41.1mV	4.7V
Q389	8.9V	112mV	8.9V	Q826	7mV	8.6mV	7.1mV	Q952	4.7V	41.3mV	35.8mV
Q458	2.5V	108mV	9.7V	Q828	14.3V	35.7mV	14.3V	Q981	4.5V	4.9V	3.8V
Q459	105mV	—	107mV	Q831	35.6mV	115mV	2.6V	Q991	4.5V	4.9V	3.8V
Q471	0.6V	8.4V	1.2V	Q841	14.2V	13.5V	14.2V				
Q476	4.1V	112mV	5V	Q846	35.6mV	146.8mV	1.9V				

	1	2	3	4	5
Q391	116mV	115mV	4.5mV	—	4.5V
Q452	13.9V	170mV	5V	100mV	169mV
Q454	13.9V	9.7V	106mV	100mV	129mV
Q456	129mV	13.9V	127mV	100mV	4.8V
Q616	46.8mV	8.8V	42.5mV	35.6mV	4.8V
Q821	4.9V	67.1mV	4.9V	4V	35.7mV

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between GND
- Measuring Condition : Indash Monitor Unit connection

CVA-1000R

Symbol No.	Part No.	Description
Q952	48T62967F09	CP., DTC114TK
Q981	48T63417F03	CP., 2SC2412K
Q991	48T63417F03	CP., 2SC2412K

Diodes

D202	48T75404W01	CP., 1SS353
D278	48T25651W01	CP., MA152WA
D296	48T68828F11	1SS133
D298	48T68828F11	1SS133
D299	48T75404W01	CP., 1SS353
D301	48T63462F01	CP., DAN202K
D446	48T75404W01	CP., 1SS353
D606	48T75404W01	CP., 1SS353
D651	48T25651W02	CP., MA152WK
D801	48T15512W01	CP., DSM10
D802	48T68580F02	DSA3A4
D811	48T75404W01	CP., 1SS353
D813	48T75404W01	CP., 1SS353
D815	48T75404W01	CP., 1SS353
D817	48T15512W01	CP., DSM10
D818	48T15512W01	CP., DSM10
D819	48T75404W01	CP., 1SS353
D821	48T25651W02	CP., MA152WK
D824	48T25651W02	CP., MA152WK
D826	48T68828F11	1SS133
D831	48T94335F01	CP., MA153
D842	48T84052F11	11ES2
ZD298	48T62934F19	Zener, CP. RD5.1MB2
ZD383	48T25766W24	Zener, HZS9C1L
ZD631	48T85306W06	Zener, CP. MA5075
ZD632	48T85306W06	Zener, CP. MA5075
ZD661	48T62934F19	Zener, CP. RD5.1MB2
ZD821	48T25766W22	Zener, HZS9B2L
ZD851	48T85306W03	Zener, CP. MA5056

Coil

L472	24T25798W13	Inductor, 1mH

Crystals

XL300	91T55371W44	CP., 7.3728MHz
XL330	91T55371W43	CP., 7.2MHz
XL420	91T55371W18	CP., 4.332MHz
XL600	91T45433W47	CP., 8MHz
XL603	91T95554W01	CP., 32.76KHz
XL620	91T45433W12	CP., 4MHz

Filters

CR401	91T15112Y01	Block, CP. 47K ohmx4/100pFX4
Z381	91T75198W05	EMI, CP. NFM61R30T472T
Z400	91T75198W05	EMI, CP. NFM61R30T472T
Z410	91T75198W05	EMI, CP. NFM61R30T472T
Z440	91T15058Y07	EMI, CP. NFM60R30T222
Z470	91T15058Y07	EMI, CP. NFM60R30T222
Z801	91T75198W05	EMI, CP. NFM61R30T472T
Z802	91T15058Y07	EMI, CP. NFM60R30T222
Z809	91T15058Y07	EMI, CP. NFM60R30T222
Z810	91T15058Y07	EMI, CP. NFM60R30T222
Z991	91T15058Y03	EMI, CP. NFM60R00T101
Z993	91T75198W05	EMI, CP. NFM61R30T472T
Z994	91T15058Y03	EMI, CP. NFM60R00T101

Surge Absober

ZNR801	48T85018W01	6KA24L

Switches

SW601	40T45282W01	Slide, SLD-42-508 (NORM/(EQ/DIY))
SW602	40T45282W01	Slide, SLD-42-508 (NORM/(EQ/DIY))
SW603	40T45282W01	Slide, SLD-42-508 (NORM/(EQ/DIY))

Capacitors

E200	23S65134W44	CP. ELY., 22µF / 25V
C201	08S65128F66	CP., 5600pF
C202	08S65128F66	CP., 5600pF
C203	08T15399W02	CP., 0.033µF
E203	23S65134W65	CP. ELY., 1µF / 50V
C204	08T15399W02	CP., 0.033µF
E204	23S65134W65	CP. ELY., 1µF / 50V
E205	23S65134W65	CP. ELY., 1µF / 50V
E206	23S65134W65	CP. ELY., 1µF / 50V
E207	23S65134W65	CP. ELY., 1µF / 50V
E208	23S65134W65	CP. ELY., 1µF / 50V
E209	23S65134W53	CP. ELY., 4.7µF / 35V
E210	23S65134W53	CP. ELY., 4.7µF / 35V
C216	08S65128F69	CP., 0.01µF
E216	23S65134W46	CP. ELY., 47µF / 25V

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF=microfarads,pF=picofarads

Abbreviations

RES.= Resistor	CAP.= Capacitor
C.F.= Carbon Film	ELY.= Electrolytic
M.F.= Metal Film	CER.= Ceramic
M.O.= Metal Oxide Film	MYL.= Mylar
M.P.= Metal Plate	TAN.= Tantalum
TR. = Transistor	POLY.= Polystyrol
TRANS.= Transformer	PP. = Polypropylene
CP. = Chip	PLT.= Polyethylene
	PF. = Polyester Film

Symbol No.	Part No.	Description
Tuner-Main P.W.Board		
IC's		
IC200	51T65131W01	TEA6320T
IC220	51T93337F01	NJM4560M
IC226	51T93337F01	NJM4560M
IC230	51T40941U02	MC14066BFEL
IC260	51T25576W04	NJM4580E
IC290	51T85153W01	TDA7384
IC300	51T55281W15	55281W15
IC330	51T35504W02	LC7219
IC338	51T75197W05	AN77L05M
IC400	51T75165W01	LC3564SM
IC401	51T93532F04	TC4S81F
IC410	51T55640W01	MC74HC373AFE
IC420	51T55054W02	SAA6579T
IC430	51T67915F01	M51143AL
IC440	51T93337F01	NJM4560M
IC450	51T40941U02	MC14066BFEL
IC460	51T93336F01	NJM4558M
IC496	51T75197W05	AN77L05M
IC600	51T65358W27	65358W27
IC605	51T95014F13	S-8052HNM-CR
IC620	51T55070W04	MB88385APF
IC630	51T93332F01	NJM2903M
IC650	51T25370W01	MC14538BFEL
IC811	51T75191W03	AN7705F
IC813	51T95014F09	S-8054ALR-LN
IC815	51T45178W02	TC4W53F
IC856	51T75197W09	AN77L09M
IC900	51T93337F01	NJM4560M
IC910	51T93337F01	NJM4560M
IC920	51T93337F01	NJM4560M
IC950	51T15630W03	MC14052BFL1
IC961	51T75197W05	AN77L05M
IC970	51T55090W02	NJM2246
IC976	51T45178W02	TC4W53F

Symbol No.	Part No.	Description
Transistors		
Q203	48T62967F34	CP., DTC363TK
Q204	48T62967F34	CP., DTC363TK
Q271	48T62967F34	CP., DTC363TK
Q272	48T62967F34	CP., DTC363TK
Q281	48T62967F34	CP., DTC363TK
Q282	48T62967F34	CP., DTC363TK
Q296	48T62967F03	CP., DTC124K
Q297	48T62966F09	CP., DTA114T
Q299	48T62967F03	CP., DTC124K
Q383	48T69176F02	2SC3421
Q385	48T84234F04	2SB1238
Q386	48T62967F03	CP., DTC124K
Q389	48T84234F04	2SB1238
Q452	48T73888F08	CP., FMG1
Q454	48T73888F08	CP., FMG1
Q456	48T73888F08	CP., FMG1
Q458	48T62967F03	CP., DTC124K
Q459	48T62967F03	CP., DTC124K
Q471	48T63417F03	CP., 2SC2412K
Q476	48T63420F01	CP., 2SA1037K
Q491	48T63420F01	CP., 2SA1037K
Q492	48T62967F03	CP., DTC124K
Q616	48T73888F08	CP., FMG1
Q641	48T62967F08	CP., DTC144WK
Q648	48T62966F03	CP., DTA124
Q649	48T62967F03	CP., DTC124K
Q811	48T73888F12	CP., FMC2
Q812	48T73888F12	CP., FMC2
Q813	48T73888F12	CP., FMC2
Q821	48T73888F12	CP., FMC2
Q822	48T62967F03	CP., DTC124K
Q823	48T62967F03	CP., DTC124K
Q824	48T73888F12	CP., FMC2
Q826	48T62967F03	CP., DTC124K
Q828	48T63420F01	CP., 2SA1037K
Q831	48T62967F05	CP., DTC143XK
Q841	48T84366F04	2SB1243
Q846	48T62967F05	CP., DTC143XK
Q848	48T84366F04	2SB1243
Q851	48T62967F09	CP., DTC114TK
Q861	48T84366F04	2SB1243
Q862	48T62967F03	CP., DTC124K
Q871	48T84366F04	2SB1243
Q872	48T62967F03	CP., DTC124K
Q951	48T62967F09	CP., DTC114TK

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Symbol No.	Part No.	Description
E456	23S65134W64	CP. ELY., 0.47μF / 50V
E458	23S65134W44	CP. ELY., 22μF / 25V
C459	08S65128F69	CP., 0.01μF
E459	23S65134W79	CP. ELY., 0.68μF / 50V
E460	23S65134W46	CP. ELY., 47μF / 25V
C461	08S65128F69	CP., 0.01μF
C462	08S45676W77	CP., 0.033μF
C463	08T55401W37	CP., 0.1μF
E464	23S85262W09	CP. ELY., (B.P) 2.2μF / 35V
C465	08S65128F69	CP., 0.01μF
C466	08T55390W31	TF, 0.15μF
E467	23S65134W47	CP. ELY., 100μF / 25V
C468	08S45676W77	CP., 0.033μF
C471	08S65128F69	CP., 0.01μF
C472	08S65128F61	CP., 2200pF
C473	08S65128F81	CP., 0.039μF
C476	08S65128F69	CP., 0.01μF
E476	23S65134W61	CP. ELY., 0.1μF / 50V
C496	08T15399W01	CP., 0.022μF
E496	23S65134W47	CP. ELY., 100μF / 25V
C497	08S35374W01	CP., 0.1μF
E497	23S65134W47	CP. ELY., 100μF / 25V
C600	08T15399W01	CP., 0.022μF
E600	23S65134W24	CP. ELY., 220μF / 10V
C601	08S82122F18	CP., 16pF
C602	08S82122F19	CP., 18pF
C603	08S82122F20	CP., 20pF
C604	08S82122F20	CP., 20pF
C605	08S82122F61	CP., 1000pF
E606	23S65134W74	CP. ELY., 10μF / 50V
C619	08S65128F69	CP., 0.01μF
C620	08S65128F69	CP., 0.01μF
E620	23S65134W47	CP. ELY., 100μF / 25V
C621	08S82122F23	CP., 27pF
C622	08S82122F23	CP., 27pF
C630	08S65128F69	CP., 0.01μF
C641	08S82122F61	CP., 1000pF
C649	08T15399W02	CP., 0.033μF
C650	08S65128F69	CP., 0.01μF
C651	08S35374W01	CP., 0.1μF
C652	08S35374W01	CP., 0.1μF
C653	08S82122F37	CP., 100pF
C661	08S35374W01	CP., 0.1μF
C801	08S82122F61	CP., 1000pF
C802	08S35374W01	CP., 0.1μF
C803	08S82122F61	CP., 1000pF
C804	08S35374W01	CP., 0.1μF
E810	23T00149L40	ELY., 1000μF / 25V
C811	08S65128F69	CP., 0.01μF

Symbol No.	Part No.	Description
E811	23S65134W44	CP. ELY., 22μF / 25V
C813	08S65128F69	CP., 0.01μF
E815	23S65134W46	CP. ELY., 47μF / 25V
E819	23S95416W02	ELY., 470μF / 16V
C821	08S65128F69	CP., 0.01μF
C824	08T15399W03	CP., 0.047μF
E826	23S65134W74	CP. ELY., 10μF / 50V
E851	23S65134W65	CP. ELY., 1μF / 50V
E856	23S65134W47	CP. ELY., 100μF / 25V
E861	23S65134W47	CP. ELY., 100μF / 25V
C876	08S65128F69	CP., 0.01μF
E876	23T75479W25	ELY., 220μF / 16V
E879	23T00149L40	ELY., 1000μF / 25V
E900	23S65134W44	CP. ELY., 22μF / 25V
E902	23S65134W74	CP. ELY., 10μF / 50V
E910	23S65134W44	CP. ELY., 22μF / 25V
C911	08S82122F46	CP., 240pF
C912	08S82122F46	CP., 240pF
C913	08S82122F29	CP., 47pF
C914	08S82122F29	CP., 47pF
C915	08S82122F61	CP., 1000pF
E915	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C916	08S82122F61	CP., 1000pF
E916	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C917	08S82122F46	CP., 240pF
E917	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C918	08S82122F46	CP., 240pF
E918	23S85262W09	CP. ELY., (B.P) 2.2μF / 35V
C919	08S82122F61	CP., 1000pF
E919	23S65134W74	CP. ELY., 10μF / 50V
E920	23S65134W44	CP. ELY., 22μF / 25V
C921	08S82122F46	CP., 240pF
C922	08S82122F46	CP., 240pF
C923	08S82122F29	CP., 47pF
C924	08S82122F29	CP., 47pF
C925	08S82122F61	CP., 1000pF
E925	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C926	08S82122F61	CP., 1000pF
E926	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C927	08S82122F46	CP., 240pF
E927	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C928	08S82122F46	CP., 240pF
E928	23S85262W09	CP. ELY., (B.P) 2.2μF / 35V
C929	08S82122F61	CP., 1000pF
E929	23S65134W74	CP. ELY., 10μF / 50V
E936	23S65134W44	CP. ELY., 22μF / 25V
E962	23S65134W44	CP. ELY., 22μF / 25V
E970	23S65134W44	CP. ELY., 22μF / 25V
C976	08S65128F69	CP., 0.01μF

Symbol No.	Part No.	Description
E217	23S65134W47	CP. ELY., 100μF / 25V
C218	08T15399W04	CP., 0.027μF
E218	23S65134W65	CP. ELY., 1μF / 50V
E221	23S65134W79	CP. ELY., 0.68μF / 50V
E222	23S65134W79	CP. ELY., 0.68μF / 50V
E226	23S65134W44	CP. ELY., 22μF / 25V
E227	23S65134W74	CP. ELY., 10μF / 50V
E230	23S65134W44	CP. ELY., 22μF / 25V
E260	23S65134W74	CP. ELY., 10μF / 50V
C261	08S82122F33	CP., 68pF
C262	08S82122F33	CP., 68pF
C263	08S82122F29	CP., 47pF
E263	23S65134W51	CP. ELY., 2.2μF / 35V
C264	08S82122F29	CP., 47pF
E264	23S65134W51	CP. ELY., 2.2μF / 35V
E265	23S65134W51	CP. ELY., 2.2μF / 35V
E266	23S65134W51	CP. ELY., 2.2μF / 35V
C267	08S82122F33	CP., 68pF
C268	08S82122F33	CP., 68pF
E271	23S65134W51	CP. ELY., 2.2μF / 35V
E272	23S65134W51	CP. ELY., 2.2μF / 35V
C281	08S82122F61	CP., 1000pF
E281	23S65134W51	CP. ELY., 2.2μF / 35V
C282	08S82122F61	CP., 1000pF
E282	23S65134W51	CP. ELY., 2.2μF / 35V
C283	08S82122F61	CP., 1000pF
C284	08S82122F61	CP., 1000pF
C290	08T55390W34	TF, 0.27μF
E290	23T75480W42	ELY., 4700μF / 16V
C291	08S82122F61	CP., 1000pF
E291	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C292	08S82122F61	CP., 1000pF
E292	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C293	08S82122F61	CP., 1000pF
E293	23S85262W16	CP. ELY., (B.P) 1μF / 50V
C294	08S82122F61	CP., 1000pF
E294	23S85262W16	CP. ELY., (B.P) 1μF / 50V
E295	23S65134W65	CP. ELY., 1μF / 50V
E296	23S65134W46	CP. ELY., 47μF / 25V
E297	23S85262W16	CP. ELY., (B.P) 1μF / 50V
E298	23S65134W74	CP. ELY., 10μF / 50V
E299	23S65134W65	CP. ELY., 1μF / 50V
C300	08S35374W01	CP., 0.1μF
E300	23S65134W47	CP. ELY., 100μF / 25V
C301	08S45677W22	CP., 27pF
C302	08S45677W22	CP., 27pF
C330	08T15399W01	CP., 0.022μF
E330	23S65134W46	CP. ELY., 47μF / 25V
C331	08S45677W22	CP., 27pF

Symbol No.	Part No.	Description
C332	08S45677W22	CP., 27pF
C333	08S82122F31	CP., 56pF
E338	23S65134W47	CP. ELY., 100μF / 25V
E339	23S65134W47	CP. ELY., 100μF / 25V
E383	23S65134W44	CP. ELY., 22μF / 25V
E384	23S65134W47	CP. ELY., 100μF / 25V
E385	23S65134W47	CP. ELY., 100μF / 25V
E389	23S65134W47	CP. ELY., 100μF / 25V
C400	08S35374W01	CP., 0.1μF
E400	23S65134W47	CP. ELY., 100μF / 25V
C401	08S35374W01	CP., 0.1μF
C405	08S65128F63	CP., 3300pF
E405	23S65134W74	CP. ELY., 10μF / 50V
C406	08S82122F37	CP., 100pF
C407	08S82122F37	CP., 100pF
C410	08S35374W01	CP., 0.1μF
E410	23S65134W47	CP. ELY., 100μF / 25V
C411	08S82122F37	CP., 100pF
C412	08S82122F37	CP., 100pF
C413	08S82122F37	CP., 100pF
C419	08S82122F61	CP., 1000pF
E420	23S65134W44	CP. ELY., 22μF / 25V
C421	08S45677W22	CP., 27pF
C422	08S45677W22	CP., 27pF
C424	08S82122F49	CP., 330pF
E424	23S65134W51	CP. ELY., 2.2μF / 35V
C425	08S82122F55	CP., 560pF
C427	08S82122F37	CP., 100pF
C428	08S82122F37	CP., 100pF
C429	08S82122F37	CP., 100pF
E430	23S65134W44	CP. ELY., 22μF / 25V
C431	08S82122F33	CP., 68pF
E431	23S65134W61	CP. ELY., 0.1μF / 50V
C432	08S82122F37	CP., 100pF
C434	08S45676W73	CP., 0.01μF
E434	23S65134W45	CP. ELY., 33μF / 25V
C435	08S45677W36	CP., 100pF
E435	23S65134W61	CP. ELY., 0.1μF / 50V
E436	23S65134W65	CP. ELY., 1μF / 50V
C438	08S45677W36	CP., 100pF
C439	08S45677W36	CP., 100pF
E440	23S65134W44	CP. ELY., 22μF / 25V
C442	08S82122F59	CP., 820pF
C443	08S65128F69	CP., 0.01μF
C445	08T15399W01	CP., 0.022μF
C446	08S45677W36	CP., 100pF
C450	08S45676W80	CP., 0.022μF
E450	23S65134W46	CP. ELY., 47μF / 25V
E451	23S65134W61	CP. ELY., 0.1μF / 50V

CVA-1000R

Symbol No.	Part No.	Description
R464	06S64995F61	2.2K ohm
R465	06S45674W33	100 ohm 1/16W
R466	06S45674W57	1K ohm 1/16W
R467	06S64995F85	22K ohm
R468	06S45674W75	5.6K ohm 1/16W
R469	06S64995F83	18K ohm
R471	06S64995F77	10K ohm
R472	06S64996F04	120K ohm
R473	06S64995F13	22 ohm
R476	06S64996F02	100K ohm
R477	06S64996F02	100K ohm
R491	06S64995F80	13K ohm
R492	06S64995F68	4.3K ohm
R496	06S70072F41	330 ohm 1/4W
R497	06S64996F20	560K ohm
R600	06S64996F24	820K ohm
R602	06S64996F26	1M ohm
R603	06S64995F53	1K ohm
R605	06S64995F85	22K ohm
R606	06S64995F69	4.7K ohm
R611	06S64995F93	47K ohm
R612	06S64995F93	47K ohm
R613	06S64995F53	1K ohm
R614	06S64995F53	1K ohm
R615	06S64995F93	47K ohm
R616	06S64995F85	22K ohm
R617	06S64995F85	22K ohm
R618	06S64995F85	22K ohm
R619	06S64995F53	1K ohm
R621	06S64995F53	1K ohm
R622	06S64995F69	4.7K ohm
R623	06S64995F93	47K ohm
R624	06S64995F93	47K ohm
R631	06S64995F77	10K ohm
R632	06S64995F77	10K ohm
R633	06S70072F19	39 ohm 1/4W
R634	06S70072F19	39 ohm 1/4W
R635	06S70072F19	39 ohm 1/4W
R636	06S70072F19	39 ohm 1/4W
R637	06S64995F57	1.5K ohm
R638	06S64995F57	1.5K ohm
R639	06S64995F61	2.2K ohm
R640	06S64995F61	2.2K ohm
R641	06S64995F93	47K ohm
R642	06S64995F93	47K ohm
R644	06S64995F77	10K ohm
R645	06S64995F77	10K ohm
R646	06S64995F81	15K ohm
R647	06S64995F87	27K ohm

Symbol No.	Part No.	Description
R648	06S64995F75	8.2K ohm
R649	06S70072F05	10 ohm 1/4W
R651	06S64996F26	1M ohm
R652	06S64996F14	330K ohm
R653	06S64996F18	470K ohm
R659	06S64995F80	13K ohm
R661	06S64995F77	10K ohm
R662	06S64995F93	47K ohm
R801	06S70072F39	270 ohm 1/4W
R802	06S70072F39	270 ohm 1/4W
R811	06S70072F54	1.1K ohm 1/4W
R812	06S70072F29	100 ohm 1/4W
R815	06S64995F77	10K ohm
R821	06S70072F77	10K ohm 1/4W
R822	06S70072F53	1K ohm 1/4W
R823	06S64995F80	13K ohm
R826	06S64995F77	10K ohm
R827	06S70072F61	2.2K ohm 1/4W
R828	06S70072F77	10K ohm 1/4W
R829	06S64995F77	10K ohm
R831	06S64995F69	4.7K ohm
R833	06S70072F59	1.8K ohm 1/4W
R834	06S70072F59	1.8K ohm 1/4W
R835	06S70072F89	9.1 ohm 1/4W
R836	06S70072F89	9.1 ohm 1/4W
R837	06S70072F89	9.1 ohm 1/4W
R838	06S70072F89	9.1 ohm 1/4W
R841	06S64995F78	11K ohm
R842	06S70072F77	10K ohm 1/4W
R846	06S70072F59	1.8K ohm 1/4W
R847	06S70072F59	1.8K ohm 1/4W
R848	06S64995F82	16K ohm
R851	06S64996F03	110K ohm
R852	06S64995F78	11K ohm
R853	06S64995F91	39K ohm
R856	06S64996F21	620K ohm
R857	06S70072F03	6.8 ohm 1/4W
R858	06S70072F87	6.2 ohm 1/4W
R861	06S70072F77	10K ohm 1/4W
R862	06S70072F59	1.8K ohm 1/4W
R863	06S70072F59	1.8K ohm 1/4W
R864	06S70072F58	1.6K ohm 1/4W
R865	06S70072F58	1.6K ohm 1/4W
R871	06S70072F77	10K ohm 1/4W
R872	06S70072F60	2K ohm 1/4W
R873	06S70072F60	2K ohm 1/4W
R874	06S70072F60	2K ohm 1/4W
R875	06S70072F60	2K ohm 1/4W
R901	06S64995F77	10K ohm

Symbol No.	Part No.	Description
E976	23S65134W44	CP. ELY., 22μF / 25V
E981	23S65134W44	CP. ELY., 22μF / 25V
E985	23S65134W24	CP. ELY., 220μF / 10V
E991	23S65134W44	CP. ELY., 22μF / 25V
E995	23S65134W24	CP. ELY., 220μF / 10V
CA331	91T15095Y01	Block, CP. 100pFX4
CA401	91T15095Y01	Block, CP. 100pFX4
Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R202	06S64995F80	13K ohm
R203	06S64995F92	43K ohm
R204	06S64995F92	43K ohm
R209	06S64995F53	1K ohm
R210	06S64995F53	1K ohm
R211	06S64995F85	22K ohm
R212	06S64995F85	22K ohm
R216	06S64995F53	1K ohm
R217	06S64995F93	47K ohm
R221	06S64995F91	39K ohm
R222	06S64995F91	39K ohm
R223	06S64995F77	10K ohm
R224	06S64995F77	10K ohm
R226	06S64995F77	10K ohm
R261	06S64995F80	13K ohm
R262	06S64995F80	13K ohm
R263	06S64995F85	22K ohm
R264	06S64995F85	22K ohm
R265	06S64995F85	22K ohm
R266	06S64995F85	22K ohm
R267	06S64995F80	13K ohm
R268	06S64995F80	13K ohm
R271	06S64995F37	220 ohm
R272	06S64995F37	220 ohm
R273	06S64995F92	43K ohm
R274	06S64995F92	43K ohm
R275	06S64995F29	100 ohm
R276	06S64995F29	100 ohm
R281	06S64995F37	220 ohm
R282	06S64995F37	220 ohm
R283	06S64995F92	43K ohm
R284	06S64995F92	43K ohm
R285	06S64995F29	100 ohm
R286	06S64995F29	100 ohm
R291	06S64995F37	220 ohm
R292	06S64995F37	220 ohm
R293	06S64995F37	220 ohm
R294	06S64995F37	220 ohm

Symbol No.	Part No.	Description
R295	06S64995F77	10K ohm
R296	06S64995F45	470 ohm
R298	06S64995F62	2.4K ohm
R299	06S64995F76	9.1K ohm
R301	06S45675W42	10M ohm 1/16W
R311	06S64995F93	47K ohm
R313	06S64995F93	47K ohm
R321	06S64995F53	1K ohm
R324	06S45675W06	100K ohm 1/16W
R332	06S53330F53	1K ohm 1/8W
R333	06S64995F93	47K ohm
R338	06S64996F19	510K ohm
R339	06S70072F43	390 ohm 1/4W
R341	06S70072F17	33 ohm 1/4W
R379	06S70072F11	18 ohm 1/4W
R380	06S70072F11	18 ohm 1/4W
R381	06S70072F71	5.6K ohm 1/4W
R382	06S70072F47	560 ohm 1/4W
R383	06S64995F81	15K ohm
R384	06S70072F61	2.2K ohm 1/4W
R385	06S64995F53	1K ohm
R386	06S70072F65	3.3K ohm 1/4W
R387	06S70072F53	1K ohm 1/4W
R389	06S64996F20	560K ohm
R401	06S45674W97	47K ohm 1/16W
R421	06S45674W65	2.2K ohm 1/16W
R431	06S64996F26	1M ohm
R432	06S45674W93	33K ohm 1/16W
R433	06S45674W93	33K ohm 1/16W
R434	06S45674W57	1K ohm 1/16W
R436	06S64996F01	91K ohm
R439	06S45675W06	100K ohm 1/16W
R441	06S64996F10	220K ohm
R442	06S64995F81	15K ohm
R443	06S64995F77	10K ohm
R445	06S64996F14	330K ohm
R446	06S64995F29	100 ohm
R447	06S64995F81	15K ohm
R448	06S64996F02	100K ohm
R452	06S64995F61	2.2K ohm
R453	06S64995F77	10K ohm
R454	06S64995F77	10K ohm
R455	06S64995F77	10K ohm
R456	06S64995F77	10K ohm
R457	06S64995F77	10K ohm
R459	06S64995F53	1K ohm
R461	06S64995F53	1K ohm
R462	06S64995F53	1K ohm
R463	06S64995F61	2.2K ohm

Symbol No.	Part No.	Description
R902	06S64995F77	10K ohm
R903	06S64995F82	16K ohm
R911	06S64995F76	9.1K ohm
R912	06S64995F76	9.1K ohm
R913	06S64995F82	16K ohm
R914	06S64995F82	16K ohm
R915	06S64995F82	16K ohm
R916	06S64995F82	16K ohm
R917	06S64995F76	9.1K ohm
R918	06S64995F76	9.1K ohm
R921	06S64995F76	9.1K ohm
R922	06S64995F76	9.1K ohm
R923	06S64995F82	16K ohm
R924	06S64995F82	16K ohm
R925	06S64995F82	16K ohm
R926	06S64995F82	16K ohm
R927	06S64995F76	9.1K ohm
R928	06S64995F76	9.1K ohm
R929	06S64995F26	75 ohm
R933	06S64995F26	75 ohm
R949	06S64995F93	47K ohm
R951	06S64995F85	22K ohm
R952	06S64995F85	22K ohm
R961	06S70072F37	220 ohm 1/4W
R962	06S70072F38	240 ohm 1/4W
R971	06S64995F93	47K ohm
R973	06S64995F69	4.7K ohm
R974	06S64995F69	4.7K ohm
R976	06S64996F02	100K ohm
R977	06S64995F69	4.7K ohm
R981	06S64995F26	75 ohm
R982	06S64995F70	5.1K ohm
R983	06S64996F02	100K ohm
R984	06S70072F41	330 ohm 1/4W
R985	06S64995F25	68 ohm
R991	06S64995F26	75 ohm
R992	06S64995F70	5.1K ohm
R993	06S64996F02	100K ohm
R994	06S70072F41	330 ohm 1/4W
R995	06S64995F25	68 ohm
R996	06S64995F93	47K ohm
RA401	06T45591W02	Block, CP. 47K ohm X4
RA402	06T45591W02	Block, CP. 47K ohm X4
RA403	06T45591W02	Block, CP. 47K ohm X4

Symbol No.	Part No.	Description
Tuner-Sub P.W.Board		
Transistor		
Q391	48T73888F08	CP., FMG1
Diodes		
D391	48T63462F01	CP., DAN202K
D392	48T63462F01	CP., DAN202K
Filter		
LPF391	91T75257W02	LPF, LPF11830KH
Surge Absober		
ZNR391	48T85229W01	RA-201
Capacitors		
E381	23S55311W66	CP. TAN., 0.68µF / 35V
E382	23S55311W61	CP. TAN., 0.1µF / 35V
C385	08S45676W73	CP., 0.01µF
C391	08S65128F69	CP., 0.01µF
E391	23S65134W44	CP. ELY., 22µF / 25V
C393	08S45676W73	CP., 0.01µF
C394	08S65128F69	CP., 0.01µF
C395	08T15399W03	CP., 0.047µF
C396	08S45676W80	CP., 0.022µF
C398	08S45676W80	CP., 0.022µF
E398	23S55311W46	CP. TAN., 22µF / 20V
C399	08S45676W80	CP., 0.022µF
E399	23S55311W46	CP. TAN., 22µF / 20V
Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R391	06S64995F77	10K ohm
R392	06S64995F77	10K ohm
R393	06S64995F77	10K ohm
R394	06S64995F53	1K ohm
R395	06S64995F61	2.2K ohm
R396	06S64995F93	47K ohm
R397	06S45674W97	47K ohm 1/16W

Symbol No.	Part No.	Description
Miscellaneous		
ET393	01T55618W05	Assy., Antenna Receptacle
ET801	09T55175W16	POWER SUPPLY Connector
ET907	09T13515W06	DISPLAY OUTPUT Connector
DIN601	09T55071W01	Ai-NET Connector
JK200	09T95285W01	RCA Jack (AUDIO - REAR - FRONT/N.F.P.)
JK910	09T75321W02	RCA Jack (AUX1)
JK920	09T75321W02	RCA Jack (AUX2)
JK981	09T95284W01	RCA Jack (VIDEO OUTPUT)

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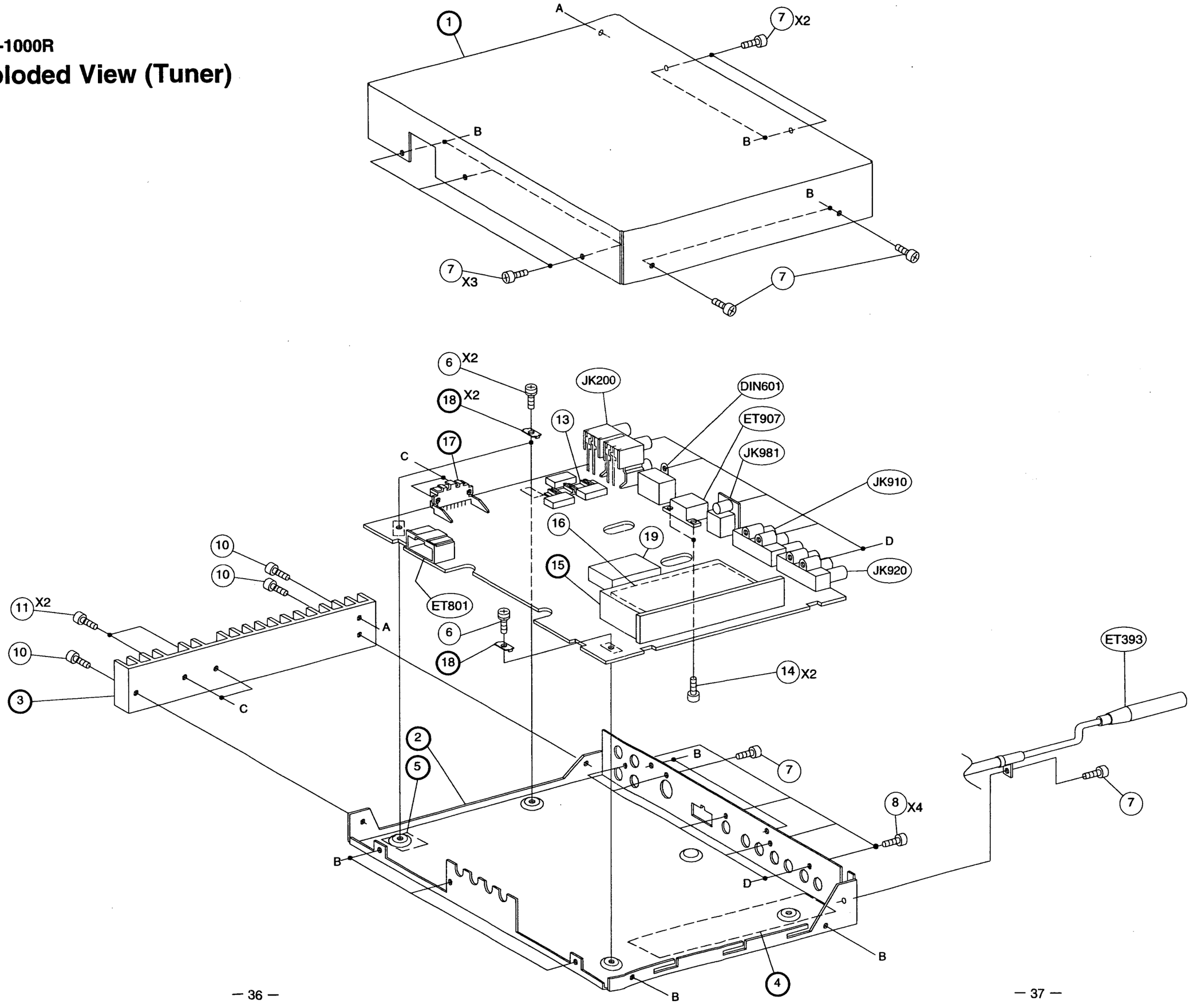
Exploded View (Tuner)



• Indash Monitor Unit

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Specifications

Variety ..... LCD 5.6 inch Color Display
LCD ..... Transparent type TN LCD
Driving Form ..... TFT Active Matrix
Back Light ..... U-shaped cold cathode FL Tube
Current Consumption (Vol. 0dB) ..... Dimmer OFF : 1.2A
Dimmer ON : 700mA
Power Supply ..... DC14.4V (11V~16V allowable)
Number of Picture Elements ..... 224, 640 pcs. (H : 960×V : 234)
Semiconductors ..... 42 IC's, 78 Transistors, 18 Diodes, 19 Zener Diodes, 1FET
Dimensions (W×H×D) ..... 178×50×186.5mm
Weight 1.93kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

Cabinet Assembly Parts List

NOTE:Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description
6		03S40036U26	Screw, W/Washer (M2.6X6)
7		03S38013W47	Screw, Flat (M2.6X5)
8		03S68555F42	Screw, Pan (M3X6)
10		03S38013W48	Screw, Flat (M2.6X8)
11		03S38013W49	Screw, Flat (M2.6X14)
13		36A80303W01	Knob, Slide
14		03S63857F51	Screw, Tapping (M3X10)
16		77B60578W01	FM / MW / LW Tuner Unit, MB4R3010 (FE391)
19		26A11081Y01	Shield, P.W.Board

Symbol No.	Index	Part No.	Description

(2) Adjustment Mode Setting

Before adjusting the following items, press buttons following steps ① through ⑩ to display an adjusting screen as shown in Figure 14.

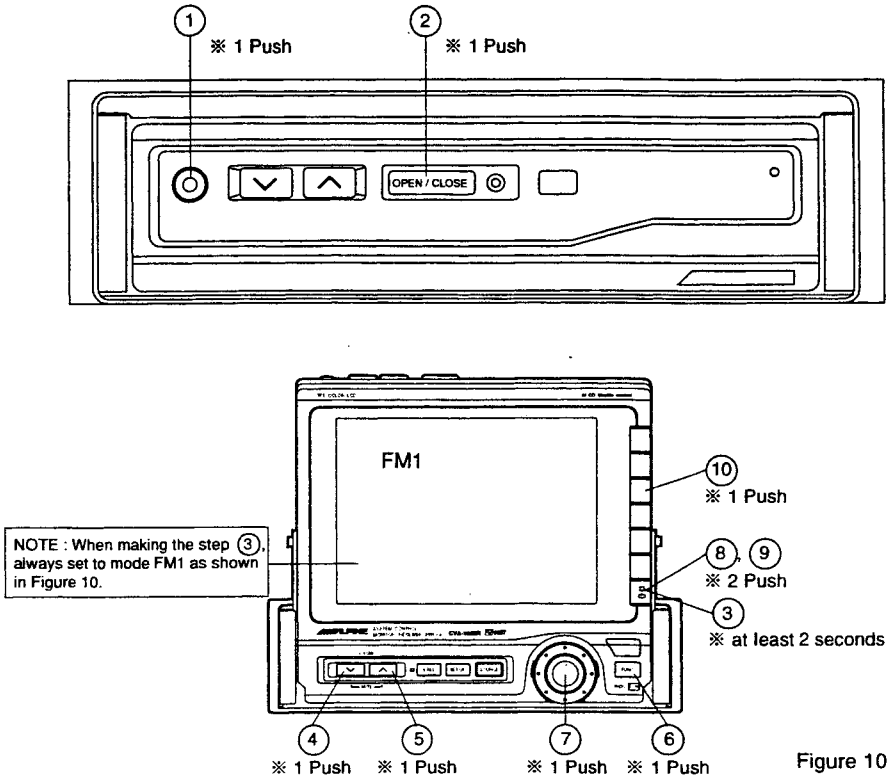


Figure 10

Screen display after following the step ⑦.

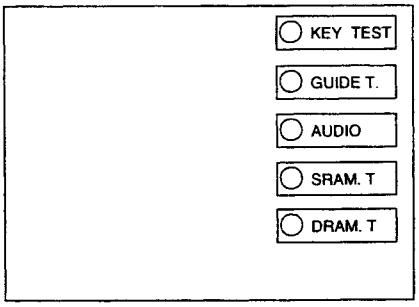


Figure 11

Screen display after following the step ⑧.

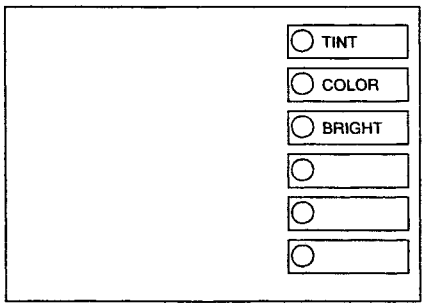


Figure 12

Screen display after following the step ⑨.

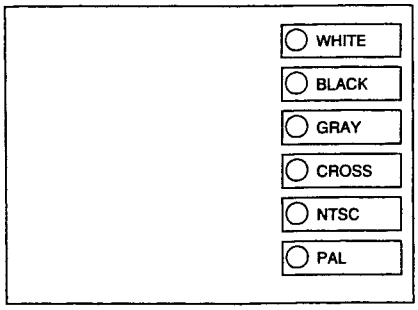


Figure 13

Screen display after following the step ⑩.

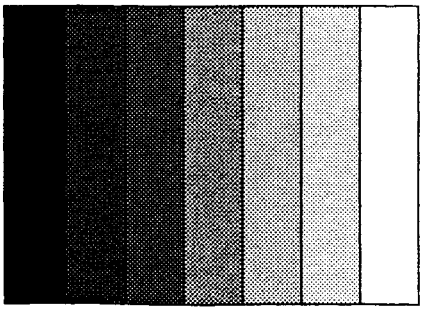


Figure 14

Adjustment Procedures

1. Before Adjustment

Before Adjustment, disassemble / reassemble by following the procedures below. (Refer to Figure 7)

(1) After removal of Top Cover, remove Cover FPC (No. 16), and remove Flexible of Assy., Drive Shaft (No. 32).

(2) Remove four screws (No. 56, 62), remove Monitor. (Remove Cover Bottom (No. 50) from Monitor.)

(3) Reassemble Monitor and Flexible (No. 32).

NOTE : For the screws No. and part No. , refer to the Exploded View (Shuttle / Monitor).

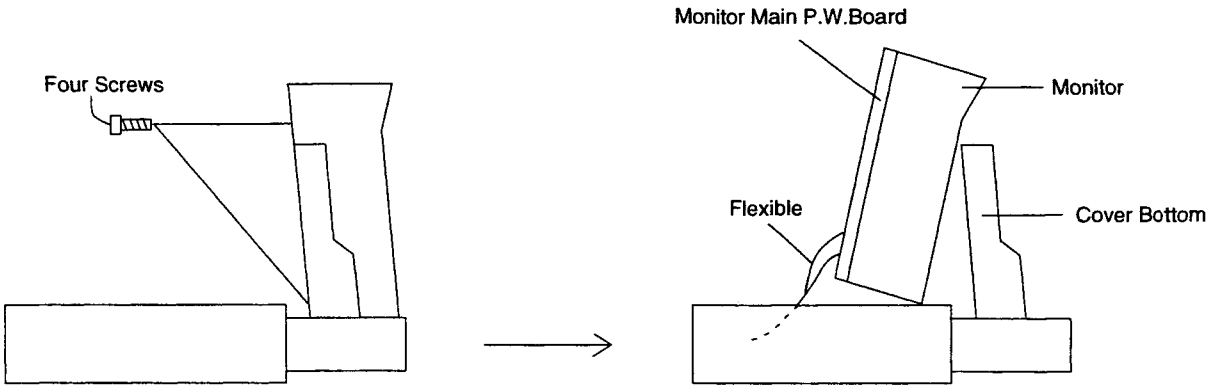


Figure 7

2. Adjustment Procedures

(1) Connections

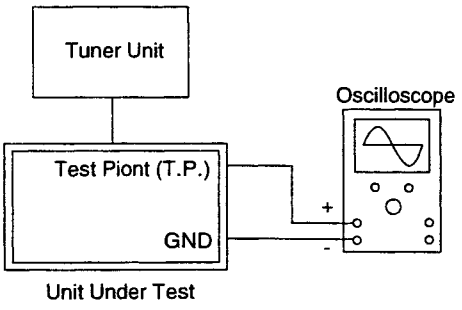


Figure 8

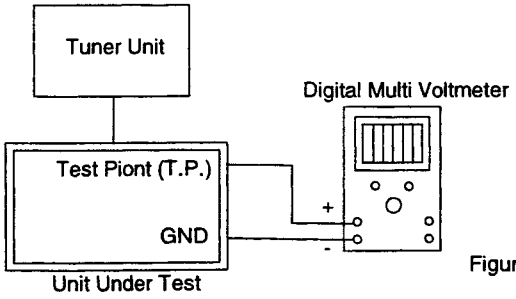
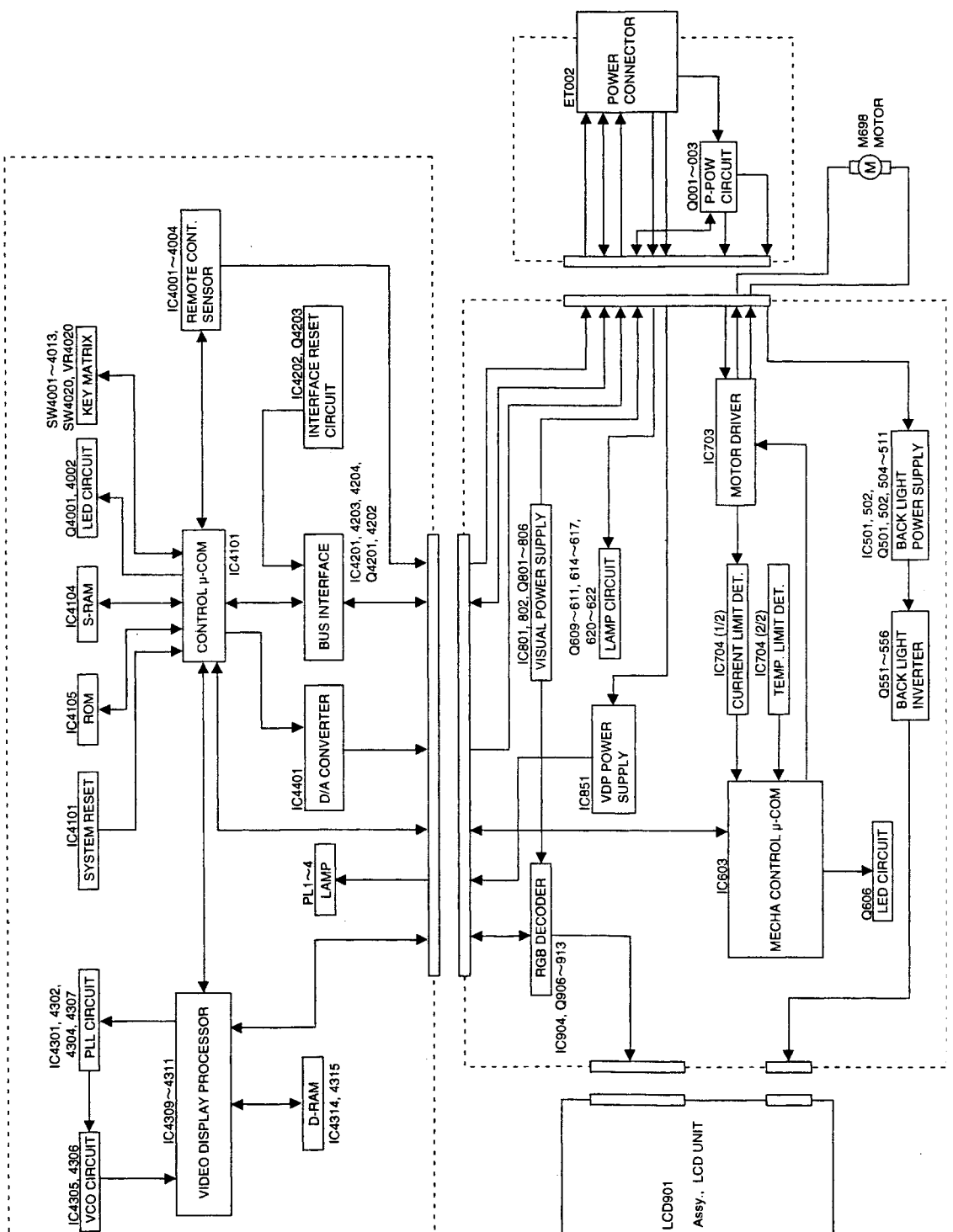
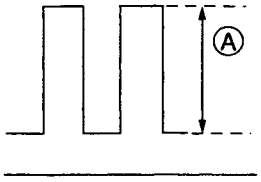
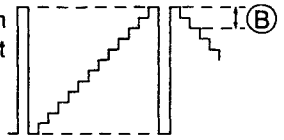
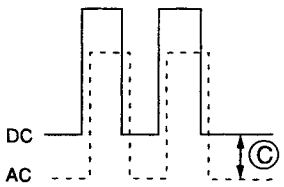
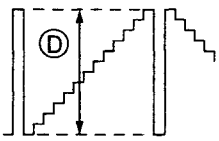
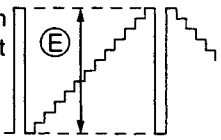
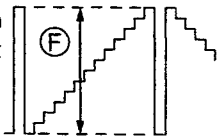


Figure 9

Block Diagram



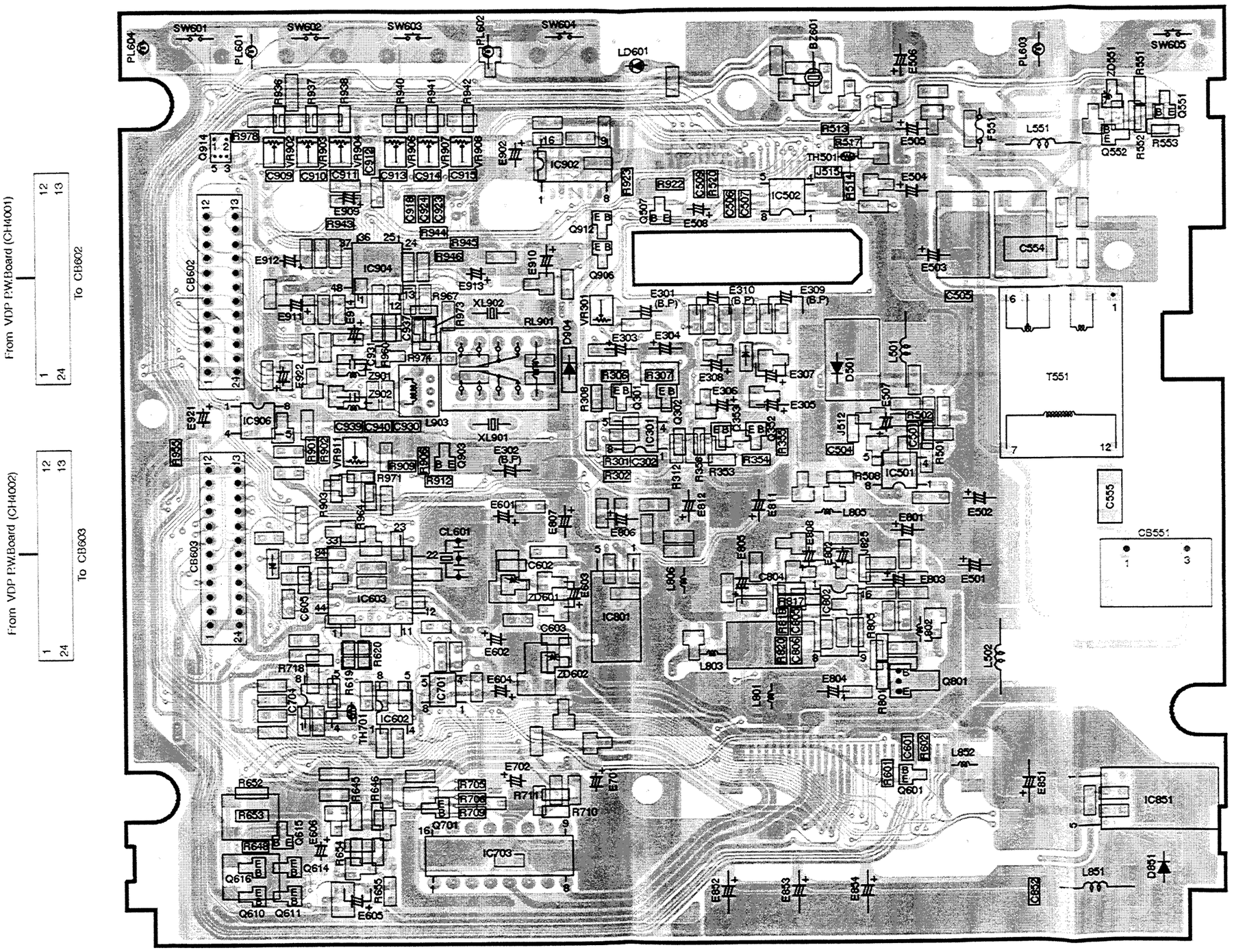
(3) Adjustment Prosedures

Step	Description	Connection	Test Point / P.W.Board Coordinates	Adjustment
1	Voltage Adjustment (VR902)	Figure 8	T.P.17 (2-E)	Output the waveform at T.P. 17 and adjust VR902 so that the value of Ⓐobtains 6.7p-p±0.2V. 
2	Voltage Adjustment (VR907)	Figure 8	T.P.28 (2-F)	Output the waveform at T.P. 28 and adjust VR907 so that the value of Ⓑobtains 1±0.2V. 
3	Voltage Adjustment (VR908)	Figure 9	T.P.6 (2-F)	Adjust VR908 so that the value at T.P.6 obtains 2.5±0.05V.
4	Voltage Adjustment (VR301)	Figure 8	T.P.17 (2-E)	Output the waveform at T.P. 17 and adjust VR301 so that the value of Ⓒobtains 1.5±0.2V. 
5	Waveform Adjustment (VR906)	Figure 8	T.P.28 (2-F)	Output the waveform at T.P. 28 and adjust VR906 so that the value of Ⓓobtains 4Vp-p±0.2V. 
6	Waveform Adjustment (VR903)	Figure 8	T.P.27 (2-F)	Output the waveform at T.P. 27 and adjust VR903 so that the value of Ⓔobtains 4Vp-p±0.2V. 
7	Waveform Adjustment (VR904)	Figure 8	T.P.26 (2-F)	Output the waveform at T.P. 26 and adjust VR904 so that the value of Ⓕobtains 4Vp-p±0.2V. 
8	Voltage Adjustment (VR911)	Figure 9	T.P.14 (3-F)	Adjust VR911 so that the value at T.P.14 obtains 2.56±0.1V.

NOTE : For the Ajustment parts and Test Points, refer to the Parts Layout on P.W.Boards and Wiring Diagram (2/3).

Parts Layout on P.W.Boards and Wiring Diagram (1/3)

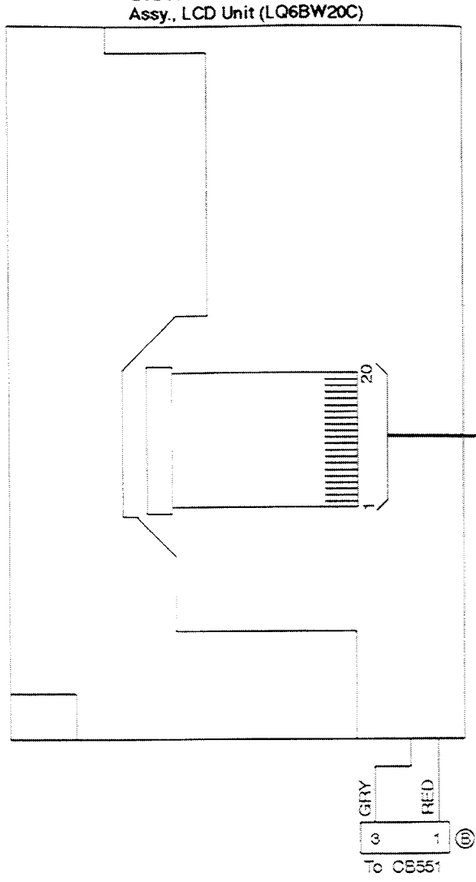
Monitor Main P.W.Board (Component Side View)



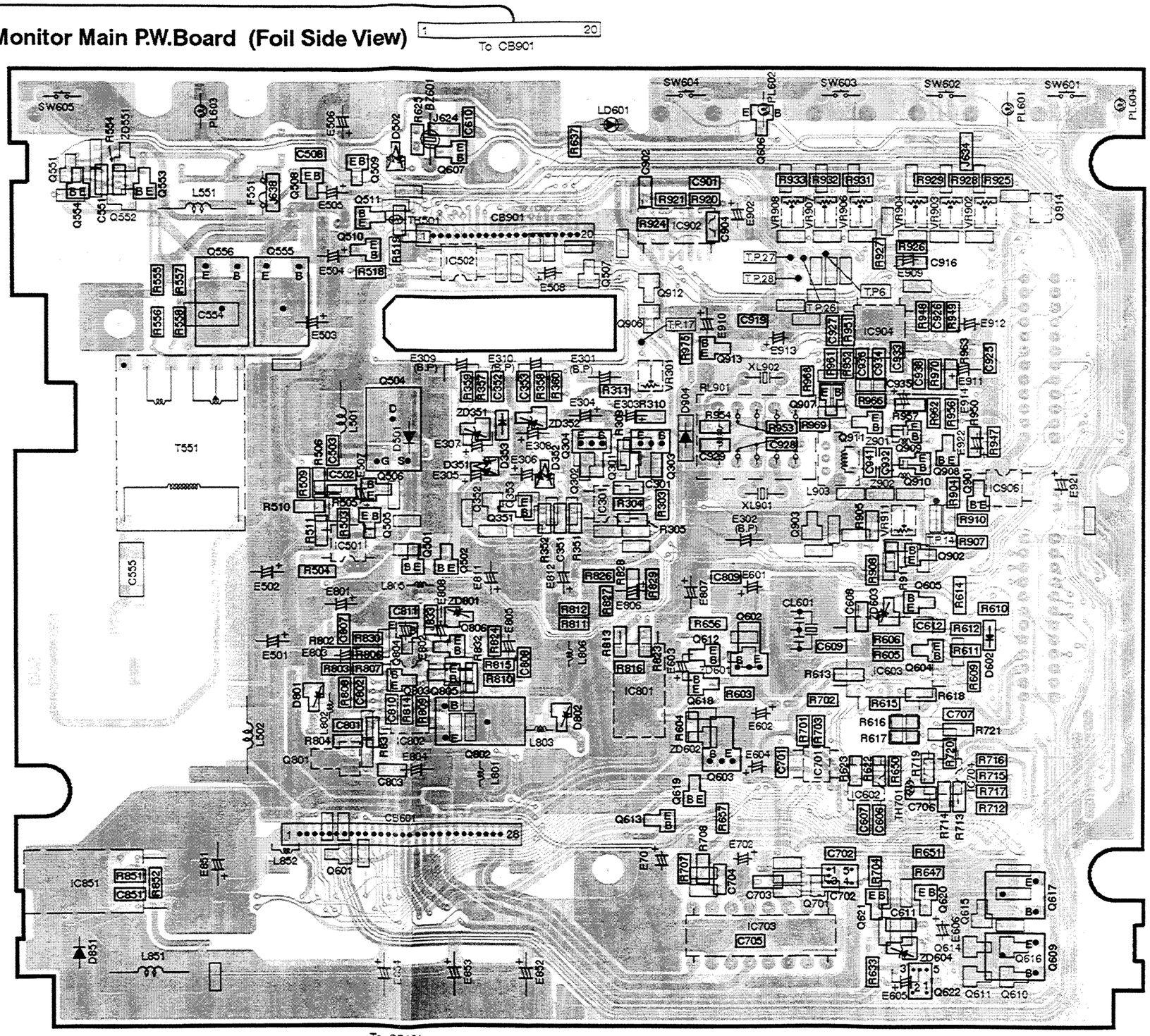
CVA-1000R

Parts Layout on P.W.Boards and Wiring Diagram (2/3)

LCD901
Assy., LCD Unit (LQ6BW20C)



Monitor Main P.W.Board (Foil Side View)



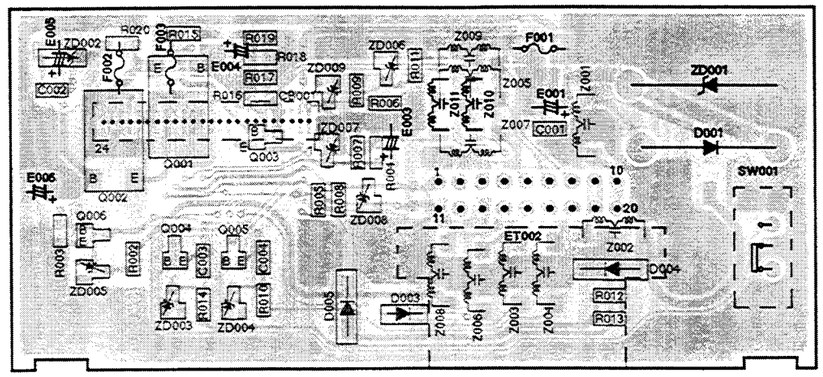
Orange Color Pattern :Component Side Pattern
Blue Color Pattern :Foil Side Pattern

Parts Layout on P.W.Boards and Wiring Diagram (3/3)

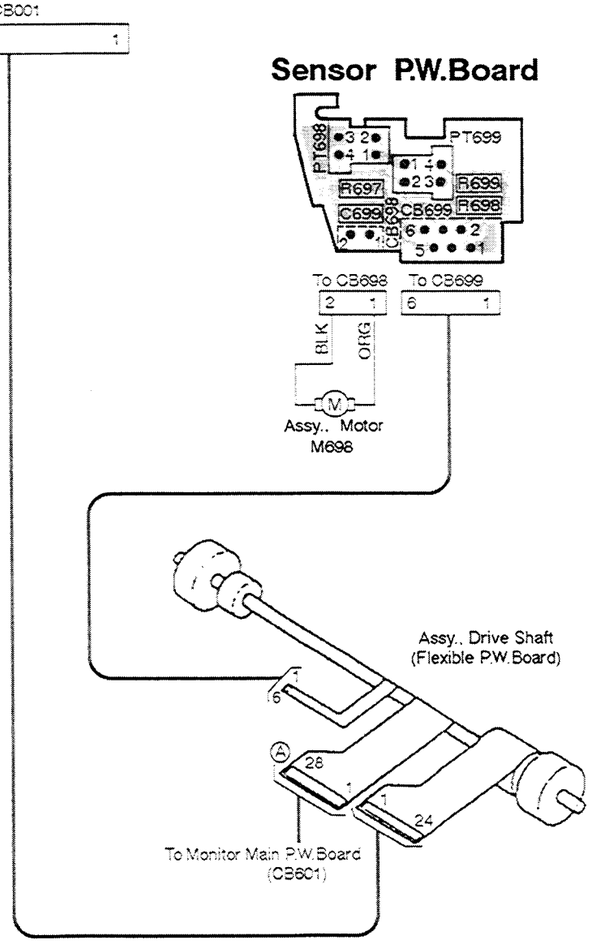
CVA-1000R

All P.W.Boards viewed from soldered side.

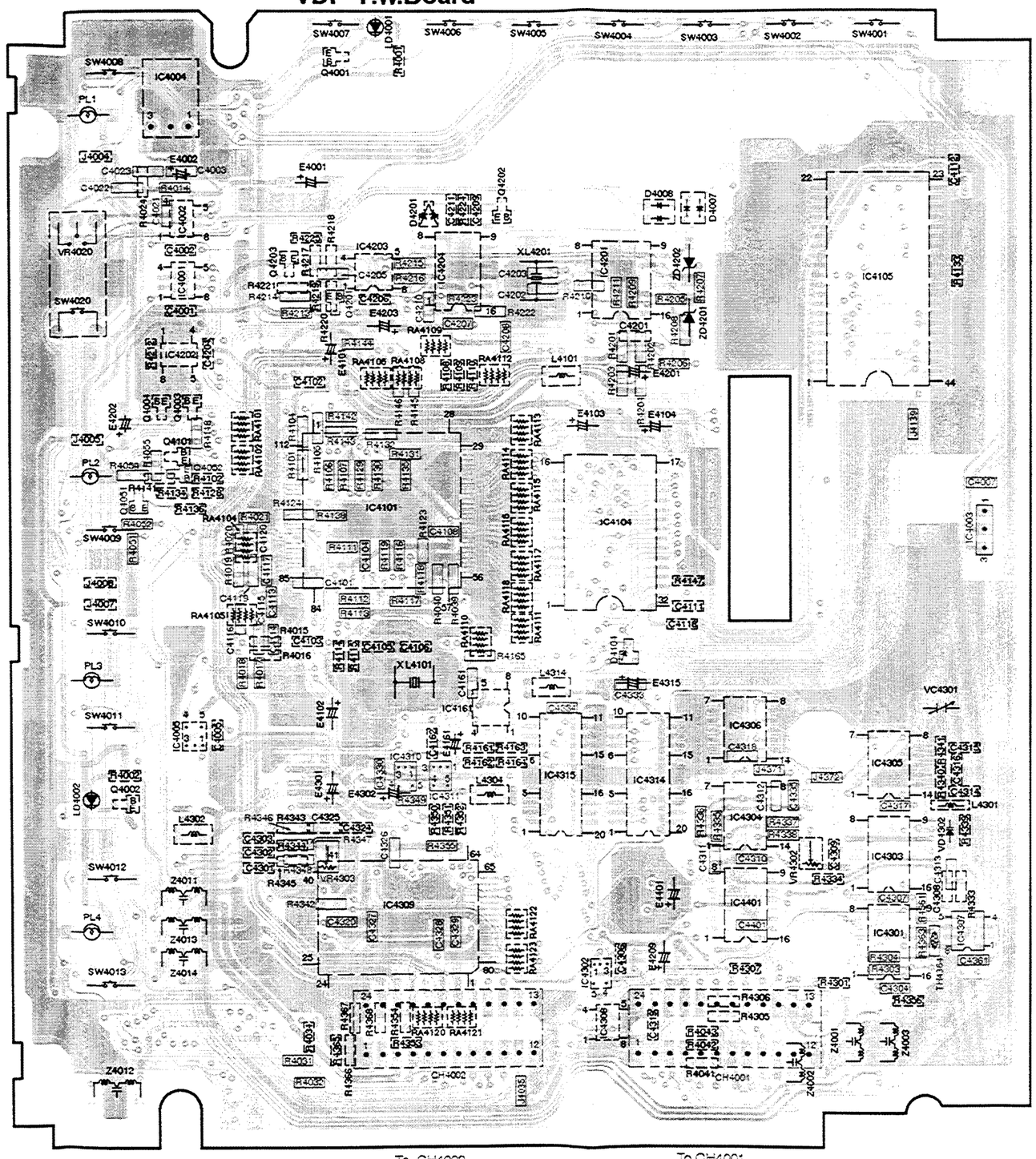
Rear P.W.Board



Sensor P.W.Board



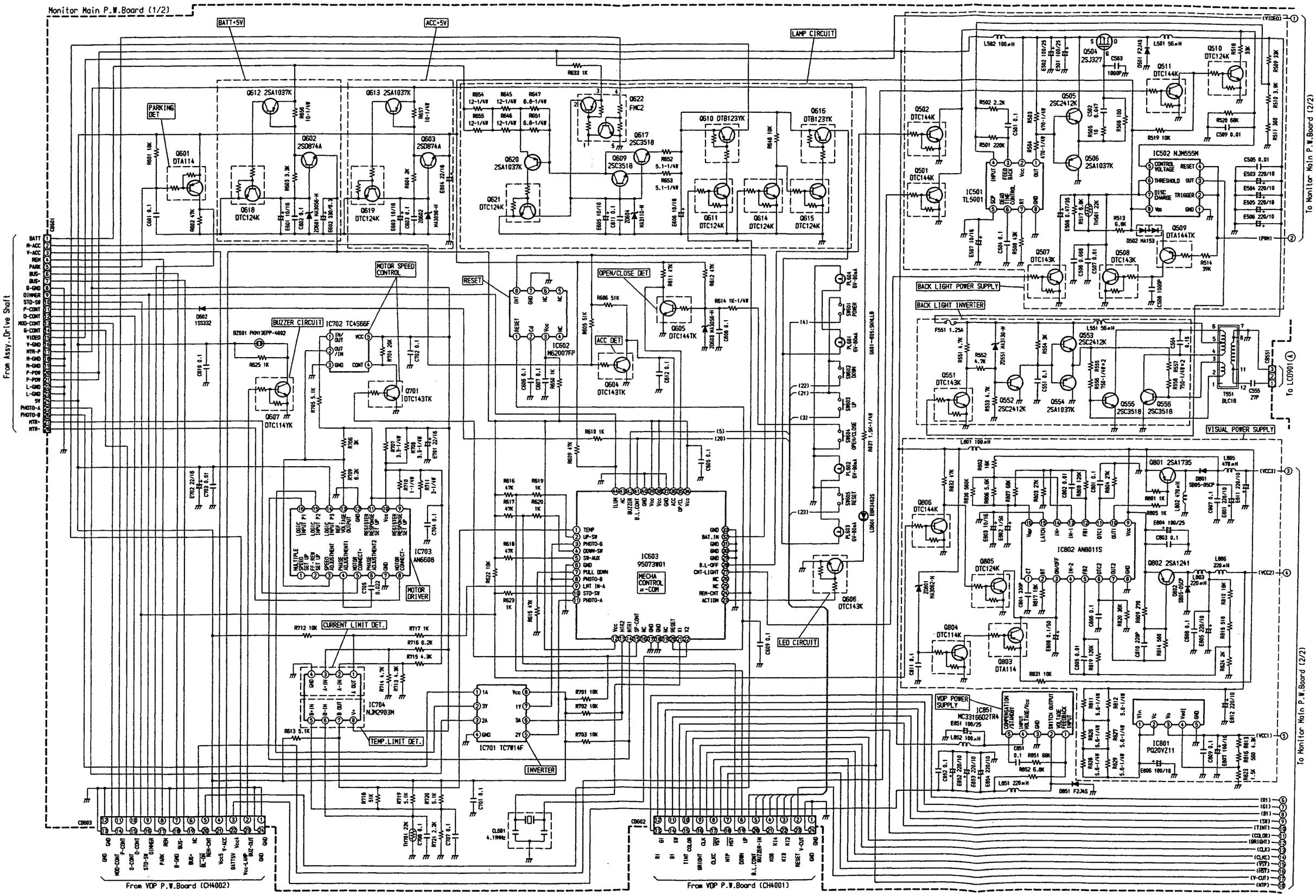
VDP P.W.Board



Orange Color Pattern :Component Side Pattern
Blue Color Pattern :Foil Side Pattern

Schematic Diagram (1/4)

CVA-1000R



Schematic Diagram (2/4)

Monitor Main P.W.Board (2/2)

To Monitor Main P.W.Board (1/2)

CON ELECTRODE DRIVER CIRCUIT

GATE+B

EVEN SYNC. CONTROL

PICTURE CONTROL BUFFER

VIDEO INPUT BUFFER

RGB DECODER

CLOCK SYNC. SWITCHING BUFFER

To Monitor Main P.W.Board (CB551)

LCD901 Assy.,LCD Unit (LQ6BW20C)

Sensor P.W.Board

SHUTTLE POSITIONING SENSOR

PT698 ON2170-R

PT699 ON2170-R

M698 Assy.,Motor (10V)

Assy., Drive Shaft (Flexible P.W.Board)

To Monitor Main P.W.Board (CB601)

Rear P.W.Board

ET002 20P Connector

P-POW CIRCUIT

ACC DET

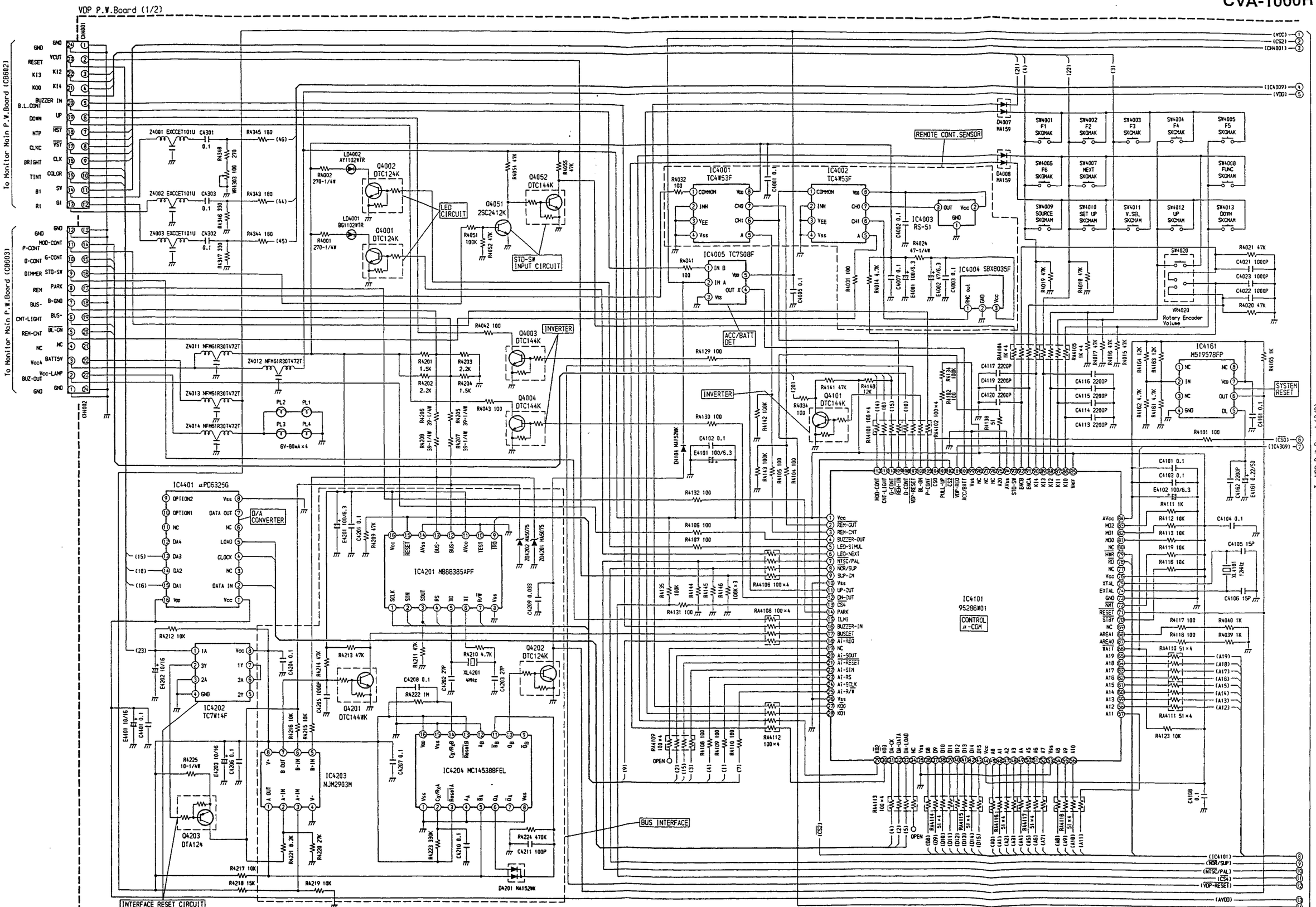
DIMMER DET

ACC DET (AT-NET)

SW001 INDASH OPEN/CLOSE DETECTOR

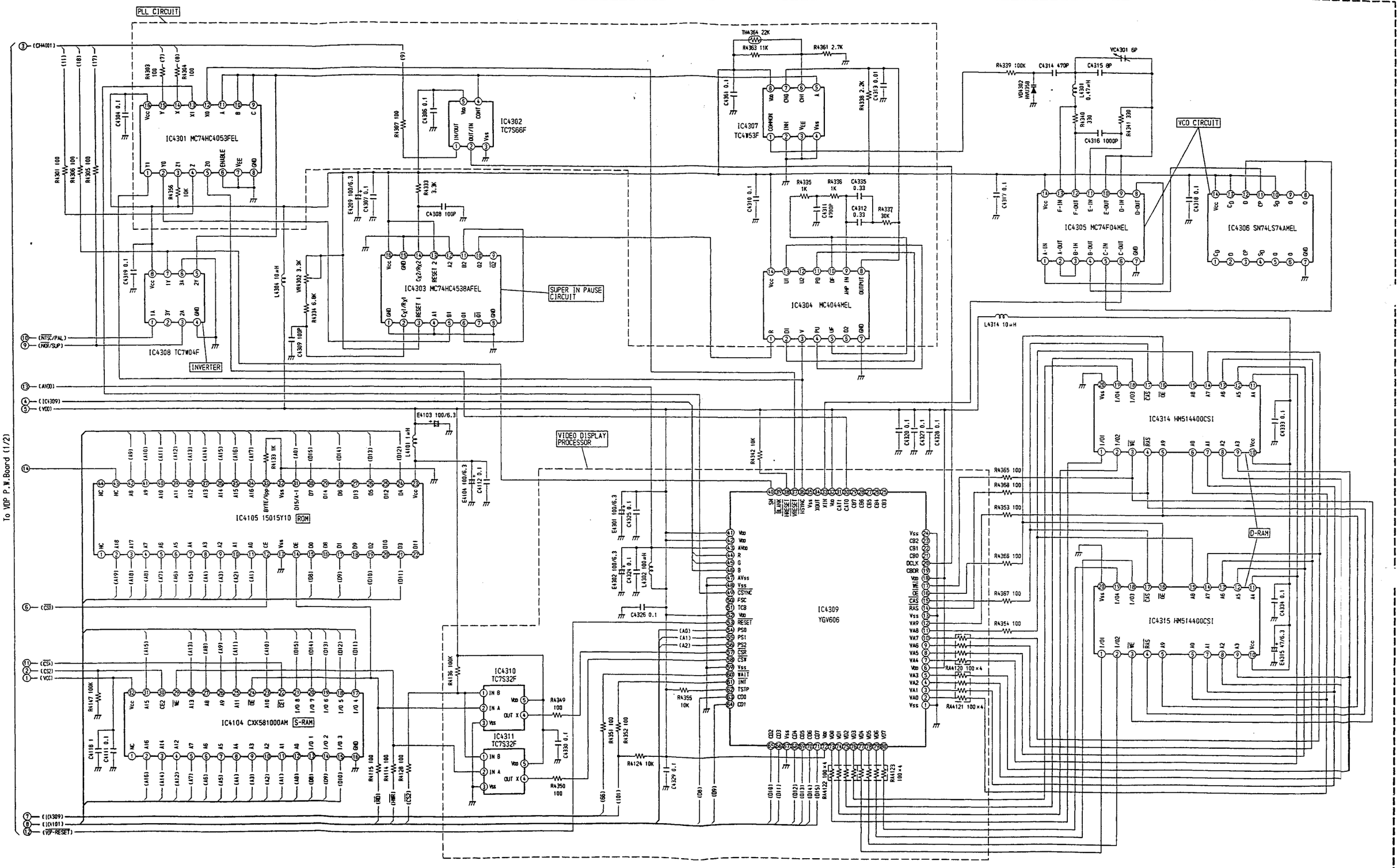
Schematic Diagram (3/4)

CVA-1000R



Schematic Diagram (4/4)

VDP P.W.Board (2/2)



CVA-1000R

IC4101

1	5.1V	31	0.2V	63	170.5mV	88	132.8mV
2, 3	5V	32	181.3mV	64	0.7V	89	132.9mV
4–7	154.8mV	33, 34	0.2V	65	170.1mV	90	132.8mV
8	154.7mV	35	179.1mV	66	5.1V	91	4.6V
9, 10	157.7mV	36	1.4V	67	154mV	92	132.8mV
11	188.5mV	37	172mV	68	154.4mV	93	5V
12	188.4mV	38	0.8V	69	NC	94	122.8mV
13	4.8V	39	168.3mV	70	5.1V	95	122.5mV
14	5.3V	40	168.1mV	71	5V	96–98	NC
15	5.2V	41	160.7mV	72	5.1V	99	0.8V
16	84.8mV	42, 43	159.9mV	73	138.9mV	100	122.7mV
17	0.2V	44	5V	74	2.7V	101	5.3V
18	5.1V	45–48	0.7V	75	5.1V	102–104	5.1V
19	1V	49	0.8V	76	1.9V	105	123.2mV
20	181.3mV	50–52	0.7V	77	NC	106	122.9mV
21–25	5V	53	160.6mV	78	5V	107	1.1V
26	182.1mV	54–56	0.7V	79–82	5.1V	108	122.6mV
27	5V	57	—	83	136.8mV	109	0.6V
28, 29	0.2V	58–61	0.5V	84, 85	5.1V	110–112	122.7mV
30	181.4mV	62	0.4V	86, 87	133.1mV		

IC4104

1	—	17, 18	3.6V
2, 3	138.7mV	19	1.4V
4	138.4mV	20	4.6V
5	139.3mV	21	1.4V
6	147.5mV	22	5V
7	147.4mV	23	136.2mV
8	146mV	24	1.8V
9	146.2mV	25	132.8mV
10	146.6mV	26	138.3mV
11	3.7V	27–29	5V
12	3.6V	30	4.6V
13	144.9mV	31	132.2mV
14, 15	3.7V	32	5.3V
16	145.6mV		

IC4105

1	NC	22	0.7V
2	0.2V	23	5.1V
3	0.3V	24	127.5mV
4, 5	0.8V	25	0.7V
6–11	0.7V	26	127.5mV
12	125.7mV	27	0.7V
13	125.2mV	28	128.1mV
14	0.6V	29	0.7V
15	124.3mV	30	128.2mV
16	0.6V	31	0.7V
17	2.6V	32	127.8mV
18	0.7V	33	127.7mV
19	2.6V	34–41	0.8V
20	0.7V	42	0.9V
21	2.6V	43, 44	NC

IC4161

1	NC
2	1.6V
3	NC
4	0.2V
5	1.4V
6	5V
7	5.1V
8	NC

IC4201

1	5.1V
2	130.7mV
3, 4	5.1V
5	1.8V
6	3.2V
7	—
8	31.3mV
9	31.7mV
10	26.2mV
11	—
12	2.1V
13	3.2V
14	26.1mV
15, 16	5.1V

IC4202

1, 2	5.3V
3, 4	130mV
5	5.3V
6, 7	129.8mV
8	5.3V

IC4203

1	5.2V
2	1.6V
3	2.2V
4	135.9mV
5	3.2V
6	2.1V
7	2.8V
8	5.3V

IC4204

1	142.8mV
2	5.1V
3	5.3V
4	142.8mV
5	5.2V
6	142.7mV
7	5.3V
8	142.6mV
9	NC
10	155mV
11	4.8V
12	153mV
13	5.3V
14	4.8V
15	138.5mV
16	5.3V

IC4301

1	4.8V
2	0.9V
3, 4	4.9V
5	3.8V
6–8	0.2V
9, 11	4.9V
12–14	5V
15	4.8V
16	4.9V

IC4302

1	2.8V
2	2.9V
3	18.3mV
4, 5	1.8V

IC4303

1	182.6mV
2, 3	4.9V
4	182mV
5	—
6	181.4mV
7	4.9V
8	181.6mV
9	4.9V
10	0.3V
11	0.2V
12	193.8mV
13, 14	4.9V
15	0.2V
16	4.9V

IC4304

1, 2	0.3V
3	4.7V
4	3.8V
5	2.4V
6	3.9V
7	0.2V
8	1V
9	1.7V
10	2.5V
11	0.3V
12	NC
13	3.8V
14	4.9V

IC4305

1	2V
2, 3	1.7V
4	2.2V
5	1.8V
6	1.7V
7	185.2mV
8	2V
9–11	1.7V
12, 13	1.6V
14	4.9V

Terminal Voltage of IC/TR

IC301

1~3	6.9V
4	-5.1V
5, 6	0.6V
7	1.7V
8	7.6V

IC502

1	24.3mV
2	5.2V
3	26.7mV
4	5.2V
5	43.8mV
6, 7	34mV
8	5.2V

IC603

1	135.5mV	23	84.9mV
2~5	5.2V	24	5.2V
6	84.5mV	25, 26	NC
7	84.4mV	27	5.1V
8	5.2V	28	84.8mV
9	117.1mV	29~31	83.8mV
10	4.2V	32	5.1V
11	85mV	33	83.8mV
12	5.3V	34	5.2V
13	97.3mV	35	2.4V
14	97.4mV	36	5.1V
15	2.1V	37	83.8mV
16	NC	38, 39	5.2V
17	84.4mV	40	83.5mV
18	NC	41	5V
19	5.2V	42	84.8mV
20	5.1V	43	NC
21	2.5V	44	5.2V
22	3.2V		

IC701

1	0.4V
2	5.2V
3	—
4	83.8mV
5	84.1mV
6	96.9mV
7, 8	5.2V

IC703

1, 2	NC	9~11	10.4V
3	10V	12	23.8mV
4	1.3V	13	9.2V
5, 6	5.3V	14, 15	5.2V
7	23.8mV	16	96.4mV
8	5.3V		

IC802

1	1V
2	0.8V
3	5.5V
4	0.9V
5	0.8V
6	1.4V
7	11.4V
8	84mV
9	13.4mV
10	14.3mV
11	1.1V
12	0.6V
13, 14	0.8V
15	84.1mV
16	2.6V

IC501

1	15.1V
2	13.5V
3	0.7V
4	1V
5	24.3mV
6	1.3V
7	1V
8	24.3mV

IC602

1	5.1V
2	5V
3	5.1V
4~6	NC
7	83.6mV
8	5.1V

IC704

1	116mV
2	5.3V
3	4.5V
4	83.6mV
5	1.6V
6	4V
7	134.6mV
8	10.5V

IC801

1, 2	6.8V
3	5.3V
4	1.3V
5	84.1mV

IC851

1	5.1V
2	7V
3	84.6mV
4	13.4V
5	3.1V

IC902

1	84.8mV
2	4.8V
3	5.3V
4	5V
5	0.6V
6	84.9mV
7	5V
8, 9	84.9mV
10	4.8V
11	5.3V
12	4.9V
13	0.6V
14	84.9mV
15	5V
16	5.3V

IC904

1	2.6V	17	84.6mV	31	2.3V
2, 3	2.7V	18	84.7mV	32, 33	2.7V
4	0.6V	19	3.6V	34	0.6V
5	84.5mV	20	3.1V	35	0.3V
6	4.1V	21	2.7V	36, 37	2.4V
7	3.6V	22	3V	38	3.6V
8	3.3V	23	7.6V	39	5.1V
9, 10	2.1V	24	2.7V	40, 41	2.8V
11	176.4mV	25	3.1V	42	5.3V
12	3.1V	26	2.6V	43~45	1.4V
13	4.3V	27	1.8V	46	0.9V
14	4.5V	28	2V	47	3.2V
15	2.8V	29	2.6V	48	3.1V
16	3.4V	30	2.3V		

IC4001

1	1.3V
2, 3	132.1mV
4	132mV
5	5.1V
6	0.6V
7, 8	5.1V

IC4005

1	5.1V
2	4.6V
3	130.7mV
4, 5	5.3V

IC4002

1	0.5V
2~4	135.4mV
5	5.2V
6	0.7V
7	4.8V
8	5.1V

CVA-1000R

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μ F=microfarads,pF=picofarads

Abbreviations

RES.= Resistor	CAP.= Capacitor
C.F.= Carbon Film	ELY.= Electrolytic
M.F.= Metal Film	CER.= Ceramic
M.O.= Metal Oxide Film	MYL.= Mylar
M.P.= Metal Plate	TAN.= Tantalum
TR. = Transistor	POLY.= Polystyrol
TRANS.= Transformer	PP. = Polypropylene
CP. = Chip	PLT.= Polyethylene
	PF. = Polyester Film

Symbol No.	Part No.	Description
Monitor Main P.W.Board		
IC's		
IC301	51T93338F01	NJM4560E
IC501	51T75523W01	TL5001
IC502	51T93970F02	NJM555M
IC602	51T35308W01	M62007FP
IC603	51T95073W01	95073W01
IC701	51T55353W06	TC7W14F
IC702	51T93532F07	TC4S66F
IC703	51T55496W01	AN6608
IC704	51T93332F01	NJM2903M
IC801	51T95201W01	PQ20VZ11
IC802	51T95223W01	AN8011S
IC851	51T85108W01	MC33166D2TR4
IC902	51T84028F02	TC74HC123AF
IC904	51T95022W01	IR3Y29AM
IC906	51T65249W01	NJM2235M
Transistors/FET		
Q301	48T63419F04	CP., 2SA1036K
Q302	48T63461F04	CP., 2SC2411K
Q303	48T95329W01	CP., 2SC4540
Q304	48T95196W01	CP., 2SA1735
Q351	48T63461F04	CP., 2SC2411K
Q352	48T63461F04	CP., 2SC2411K
Q353	48T63419F04	CP., 2SA1036K
Q501	48T62967F04	CP., DTC144K
Q502	48T62967F04	CP., DTC144K
Q504	48T75133W01	FET, CP. 2SJ327
Q505	48T63417F01	CP., 2SC2412K
Q506	48T63420F01	CP., 2SA1037K
Q507	48T62967F01	CP., DTC143K
Q508	48T62967F01	CP., DTC143K
Q509	48T62966F22	CP., DTA144TK
Q510	48T62967F03	CP., DTC124K
Q511	48T62967F04	CP., DTC144K
Q551	48T62967F01	CP., DTC143K
Q552	48T63417F01	CP., 2SC2412K
Q553	48T63417F01	CP., 2SC2412K
Q554	48T63420F01	CP., 2SA1037K
Q555	48T35586W01	CP., 2SC3518
Q556	48T35586W01	CP., 2SC3518
Q601	48T62966F02	CP., DTA114
Q602	48T73023F01	CP., 2SD874A
Q603	48T73023F01	CP., 2SD874A
Q604	48T62967F23	CP., DTC143TK
Q605	48T62967F22	CP., DTC144TK
Q606	48T62967F01	CP., DTC143K
Q607	48T62967F06	CP., DTC114YK
Q609	48T35586W01	CP., 2SC3518
Q610	48T94875F04	CP., DTB123YK
Q611	48T62967F03	CP., DTC124K
Q612	48T63420F01	CP., 2SA1037K
Q613	48T63420F01	CP., 2SA1037K
Q614	48T62967F03	CP., DTC124K
Q615	48T62967F03	CP., DTC124K
Q616	48T94875F04	CP., DTB123YK
Q617	48T35586W01	CP., 2SC3518
Q618	48T62967F03	CP., DTC124K
Q619	48T62967F03	CP., DTC124K
Q620	48T63420F01	CP., 2SA1037K
Q621	48T62967F03	CP., DTC124K
Q622	48T73888F12	CP., FMC2
Q701	48T62967F23	CP., DTC143TK
Q801	48T95196W01	CP., 2SA1735
Q802	48T95195W01	CP., 2SA1241
Q803	48T62966F02	CP., DTA114
Q804	48T62967F02	CP., DTC114K
Q805	48T62967F03	CP., DTC124K
Q806	48T62967F04	CP., DTC144K
Q901	48T63420F01	CP., 2SA1037K
Q902	48T63420F01	CP., 2SA1037K
Q903	48T63420F01	CP., 2SA1037K
Q906	48T62967F03	CP., DTC124K
Q907	48T63420F01	CP., 2SA1037K
Q908	48T62967F04	CP., DTC144K
Q909	48T62967F04	CP., DTC144K
Q910	48T62967F04	CP., DTC144K
Q911	48T62967F04	CP., DTC144K
Q912	48T62967F04	CP., DTC144K
Q913	48T62967F03	CP., DTC124K

IC4306

1-6	NC
7	195.4mV
8	1.8V
9	NC
10	4.9V
11	2.1V
12	1.8V
13, 14	4.9V

IC4307

1	1.5V
2	27.6mV
3	27.5mV
4	27.2mV
5	1.8V
6	0.7V
7	1.5V
8	1.8V

IC4308

1	0.2V
2	4.9V
3, 4	0.2V
5	4.9V
6	0.2V
7, 8	4.9V

IC4310

1, 2	1.8V
3	23mV
4, 5	1.8V

IC4311

1, 2	1.8V
3	28.6mV
4, 5	1.8V

IC4309

1	141mV	31	NC	55, 56	3.8V
2	14V	32	5.1V	57, 58	5.1V
3, 4	1.4V	33	1.8V	59	120.9mV
5	1.5V	34	NC	60-62	5.1V
6	5V	35	149.5mV	63	2.8V
7-9	1.5V	36	4.7V	64	3.6V
10	1.2V	37, 38	5.1V	65, 66	3.7V
11, 12	0.8V	39	NC	67	121mV
13	142mV	40	4.9V	68	3.7V
14	3.5V	41, 42	5.1V	69	1.4V
15	4.7V	43	4.9V	70	4.6V
16	3.6V	44, 45	2.1V	71	1.4V
17, 18	5.1V	46	2V	72	5.1V
19	NC	47	88.6mV	73, 74	0.8V
20	3V	48	129.8mV	75-78	0.7V
21-23	NC	49	5V	79	0.8V
24	146.3mV	50, 51	NC	80	0.6V
25-29	NC	52, 53	5.1V		
30	3.6V	54	3.6V		

IC4314

1	0.2V
2	180.9mV
3	5.1V
4	3.5V
5	0.9V
6-8	1.5V
9	1.6V
10	5V
11-13	1.6V
14	1.2V
15	0.9V
16	3.6V
17	4.7V
18, 19	1V
20	191mV

IC4315

1	1.1V
2	1V
3	5.1V
4	3.5V
5	0.9V
6-8	1.5V
9	1.6V
10	5V
11-13	1.6V
14	1.2V
15	0.9V
16	3.6V
17	4.7V
18	1.1V
19	1V
20	0.2V

IC4401

1	4.9V
2	180mV
3	NC
4	179.6mV
5	179mV
6, 7	NC
8	90.9mV
9-12	NC
13	4.3V
14	4V
15	—
16	4.9V

	E	C	B		E	C	B		E	C	B
Q003	10.1mV	44.2mV	2.5V	Q556	—	8.5V	24.2mV	Q801	13.1V	13.4V	0.9V
Q004	10mV	13.1mV	7.1V	Q601	0.7V	5.2V	5.2V	Q802	13.4V	9.9V	13V
Q005	10mV	5.2V	10mV	Q602	5.9V	13.4V	5.3V	Q803	5.5V	5.5V	97mV
Q006	10.2mV	15.5mV	0.6V	Q603	5.3V	13.4V	5.9V	Q804	84.7mV	97mV	2.8V
Q301	2.3V	-5.1V	1.7V	Q604	84.4mV	5.1V	13.5mV	Q805	84.6mV	5.5V	99.2mV
Q302	1.1V	7.6V	1.7V	Q605	84.6mV	2.9V	84.8mV	Q806	84.6mV	99.2mV	4.2V
Q351	-5.1V	6.6V	6.7V	Q606	85.4mV	0.5V	92.8mV	Q901	1.5V	84.7mV	1V
Q352	6V	7.4V	6.6V	Q607	93.2mV	5.3V	177.3mV	Q902	3.6V	84.6mV	3.1V
Q353	6.6V	-5V	6V	Q609	11V	11.3V	10.4V	Q903	3.4V	84.6mV	2.9V
Q501	24.2mV	43.7mV	2.9V	Q610	10.3V	10.2V	142.2mV	Q910	84.2mV	86.7mV	5V
Q502	24.2mV	43.7mV	5.3V	Q611	91.2mV	142.4mV	5.2V	Q911	84.5mV	87mV	5V
Q505	13.5V	13.5V	13.6V	Q612	13.5V	84.3mV	13.4V	Q4001	19.1mV	0.8V	19.4mV
Q506	13.6V	24.1mV	13.5V	Q613	10.5V	84.3mV	10.4V	Q4002	18.2mV	0.9V	18.3mV
Q507	24.4mV	26.4mV	5.1V	Q614	91.1mV	108.2mV	5.2V	Q4003	19.9mV	5.2V	20mV
Q508	24.4mV	34.1mV	24.2mV	Q615	91.1mV	10.3V	108.3mV	Q4004	20.1mV	5.2V	20.1mV
Q510	24.2mV	43.9mV	42.1mV	Q616	10.3V	93.3mV	10.3V	Q4051	23.3mV	47mV	0.6V
Q511	24.2V	42.1mV	5V	Q617	11V	11.3V	10.3V	Q4052	23.6mV	1.8V	47mV
Q551	24.5mV	4.6V	27mV	Q618	84.2mV	5.9V	84.2mV	Q4101	19mV	1.1V	19mV
Q552	24.5mV	41.4mV	0.7V	Q619	84.4mV	5.9V	84.4mV	Q4201	24mV	1.8V	1V
Q553	29.5mV	8.5V	41.2mV	Q620	11.8V	1.3V	11.3V	Q4202	19.4mV	121.5mV	19.4mV
Q554	24.2mV	24.2mV	41.2mV	Q621	90.7mV	11V	1.3V	Q4203	5.2V	1.4V	5.2V
Q555	24.2mV	8.5V	—	Q701	24.4mV	31.6mV	2.1V				

	G	D	S
Q504	13.5V	13.3V	14.2V

	1	2	3	4	5
Q914	NC	5.3V	0.4V	5.3V	85.4mV

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between GND
- Measuring Condition : Tuner Unit connection

CVA-1000R

Symbol No.	Part No.	Description
C353	08S65128F76	CP., 0.1µF
C501	08S65128F76	CP., 0.1µF
E501	23S65134W47	CP. ELY., 100µF / 25V
C502	08S65128F74	CP., 0.047µF
E502	23S65134W47	CP. ELY., 100µF / 25V
C503	08S82122F61	CP., 1000pF
E503	23S65134W24	CP. ELY., 220µF / 10V
C504	08S65128F76	CP., 0.1µF
E504	23S65134W24	CP. ELY., 220µF / 10V
C505	08S65128F69	CP., 0.01µF
E505	23S65134W24	CP. ELY., 220µF / 10V
C506	08T15399W05	CP., 0.068µF
E506	23S65134W24	CP. ELY., 220µF / 10V
C507	08S65128F69	CP., 0.01µF
E507	23S65134W31	CP. ELY., 10µF / 16V
C508	08S82122F61	CP., 1000pF
E508	23S55311W65	CP. TAN., 0.47µF / 35V
C509	08S65128F69	CP., 0.01µF
C551	08S65128F76	CP., 0.1µF
C554	08T85349W08	CP., 0.15µF
C555	08T85340W06	CP., 27pF
C601	08S65128F76	CP., 0.1µF
E601	23S65134W31	CP. ELY., 10µF / 16V
C602	08S65128F76	CP., 0.1µF
E602	23S65134W15	CP. ELY., 330µF / 6.3V
C603	08S65128F76	CP., 0.1µF
E603	23S65134W31	CP. ELY., 10µF / 16V
E604	23S65134W32	CP. ELY., 22µF / 16V
C605	08S65128F76	CP., 0.1µF
E605	23S65134W31	CP. ELY., 10µF / 16V
C606	08S65128F76	CP., 0.1µF
E606	23S65134W31	CP. ELY., 10µF / 16V
C607	08S65128F76	CP., 0.1µF
C608	08S65128F76	CP., 0.1µF
C609	08S65128F76	CP., 0.1µF
C610	08S65128F76	CP., 0.1µF
C611	08S65128F76	CP., 0.1µF
C612	08S65128F76	CP., 0.1µF
C701	08S65128F76	CP., 0.1µF
E701	23S65134W32	CP. ELY., 22µF / 16V
C702	08S65128F76	CP., 0.1µF
E702	23S65134W32	CP. ELY., 22µF / 16V
C703	08S65128F69	CP., 0.01µF
C704	08S65128F76	CP., 0.1µF
C705	08S65128F78	CP., 0.022µF
C706	08S65128F76	CP., 0.1µF
C707	08S65128F76	CP., 0.1µF
C801	08S65128F76	CP., 0.1µF
E801	23S65134W24	CP. ELY., 220µF / 10V

Symbol No.	Part No.	Description
C802	08S65128F69	CP., 0.01µF
E802	23S65134W65	CP. ELY., 1µF / 50V
C803	08S65128F76	CP., 0.1µF
E803	23S65134W31	CP. ELY., 10µF / 16V
C804	08S82122F49	CP., 330pF
E804	23S65134W47	CP. ELY., 100µF / 25V
C805	08S65128F69	CP., 0.01µF
E805	23S65134W24	CP. ELY., 220µF / 10V
C806	08S65128F76	CP., 0.1µF
E806	23S65134W23	CP. ELY., 100µF / 10V
C807	08S65128F76	CP., 0.1µF
E807	23S65134W23	CP. ELY., 100µF / 10V
C808	08S65128F76	CP., 0.1µF
E808	23S65134W61	CP. ELY., 0.1µF / 50V
C809	08S65128F76	CP., 0.1µF
C810	08S82122F45	CP., 220pF
C811	08S65128F76	CP., 0.1µF
E811	23S65134W24	CP. ELY., 220µF / 10V
E812	23S65134W24	CP. ELY., 220µF / 10V
C851	08S65128F76	CP., 0.1µF
E851	23S65134W47	CP. ELY., 100µF / 25V
C852	08S65128F76	CP., 0.1µF
E852	23S65134W24	CP. ELY., 220µF / 10V
E853	23S65134W24	CP. ELY., 220µF / 10V
E854	23S65134W24	CP. ELY., 220µF / 10V
C901	08S65128F65	CP., 4700pF
C902	08S65128F65	CP., 4700pF
E902	23S65134W65	CP. ELY., 1µF / 50V
C904	08S65128F76	CP., 0.1µF
C909	08S65128F69	CP., 0.01µF
E909	23S65134W65	CP. ELY., 1µF / 50V
C910	08S65128F69	CP., 0.01µF
E910	23S65134W47	CP. ELY., 100µF / 25V
C911	08S65128F69	CP., 0.01µF
E911	23S65134W23	CP. ELY., 100µF / 10V
C912	08S65128F69	CP., 0.01µF
E912	23S65134W72	CP. ELY., 3.3µF / 50V
C913	08S65128F69	CP., 0.01µF
E913	23S65134W64	CP. ELY., 0.47µF / 50V
C914	08S65128F69	CP., 0.01µF
E914	23S65134W65	CP. ELY., 1µF / 50V
C915	08S65128F69	CP., 0.01µF
C916	08S82122F41	CP., 150pF
C918	08T81833F03	CP., 1µF
C919	08T81833F03	CP., 1µF
E921	23S65134W31	CP. ELY., 10µF / 16V
E922	23S65134W31	CP. ELY., 10µF / 16V
C923	08T81833F03	CP., 1µF
C924	08T81833F03	CP., 1µF

Symbol No.	Part No.	Description
Q914	48T73888F12	CP., FMC2
Diodes		
D351	48T95294W01	CP., MA740
D352	48T95294W01	CP., MA740
D353	48T16617W01	CP., 1SS332
D501	48T75066W01	CP., F2J4S
D502	48T94335F01	CP., MA153
D602	48T16617W01	CP., 1SS332
D801	48T15702W01	CP., SB05-05CP
D802	48T15702W01	CP., SB05-05CP
D851	48T75066W01	CP., F2J4S
D904	48T15512W01	CP., DSM10
ZD351	48T84735F25	Zener, CP. MA3100-L
ZD352	48T84735F25	Zener, CP. MA3100-L
ZD551	48T84735F35	Zener, CP. MA3130-M
ZD601	48T84735F09	Zener, CP. MA3056-H
ZD602	48T84735F09	Zener, CP. MA3056-H
ZD603	48T84735F09	Zener, CP. MA3056-H
ZD604	48T84735F29	Zener, CP. MA3110-M
ZD801	48T84735F11	Zener, CP. MA3062-M
Coils / Transformer		
L501	24T85339W10	Inductor, 56µH
L502	24T85339W13	Inductor, 100µH
L551	24T85339W10	Inductor, 56µH
L801	24T95202W13	Inductor, 100µH
L802	24T95202W21	Inductor, 470µH
L803	24T95202W17	Inductor, 220µH
L805	24T95202W21	Inductor, 470µH
L806	24T95202W17	Inductor, 220µH
L851	24T85339W17	Inductor, 220µH
L852	24T95202W13	Inductor, 100µH
L903	24T65189W01	Filter, TV5P
T551	25T85341W02	Transformer, CP. BLC18
Switches		
SW601	40T75104W01	Tact, SKHLLB (POWER)
SW602	40T75104W01	Tact, SKHLLB (DOWN)
SW603	40T75104W01	Tact, SKHLLB (UP)
SW604	40T75104W01	Tact, SKHLLB (OPEN / CLOSE)
SW605	40T75104W01	Tact, SKHLLB (RESET)

Symbol No.	Part No.	Description
Lamps / LED		
PL601	65T75233W01	CP., 6V-80mA
PL602	65T75233W01	CP., 6V-80mA
PL603	65T75233W01	CP., 6V-80mA
PL604	65T75232W01	6V-80mA
LD601	48T92014F01	LED, EBR3402S (RED)
Crystals		
CL601	91T65014W02	CER., Lock CP. 4.19MHz
XL901	91T45118W22	4.433619MHz
XL902	91T45118W03	3.579545MHz
Thermistors		
TH501	48T85351W04	CP., 22K ohm
TH701	48T85351W04	CP., 22K ohm
Buzzer / Filters		
BZ601	50T45330W01	PKM13EPP-4002
Z901	91T45126W02	Filter, CP. NLT4532T
Z902	91T45126W01	Filter, CP. NLT4532T
Fuse / Relay		
F551	65T85352W16	CP., 1.25A
RL901	80T25747W04	Relay, A-5W-K-OH
Capacitors		
C301	08S82122F11	CP., 8pF
E301	23S85262W06	CP. ELY., (B.P) 10µF / 16V
C302	08S65128F76	CP., 0.1µF
E302	23S85262W06	CP. ELY., (B.P) 10µF / 16V
E303	23S65134W65	CP. ELY., 1µF / 50V
E304	23S65134W65	CP. ELY., 1µF / 50V
E305	23S65134W72	CP. ELY., 3.3µF / 50V
E306	23S65134W72	CP. ELY., 3.3µF / 50V
E307	23S65134W72	CP. ELY., 3.3µF / 50V
E308	23S65134W72	CP. ELY., 3.3µF / 50V
E309	23S85262W11	CP. ELY., (B.P) 10µF / 35V
E310	23S85262W11	CP. ELY., (B.P) 10µF / 35V
C351	08S65128F76	CP., 0.1µF
C352	08S65128F76	CP., 0.1µF

CVA-1000R

Symbol No.	Part No.	Description
R654	06S70072F07	12 ohm 1/4W
R655	06S70072F07	12 ohm 1/4W
R656	06S70072F05	10 ohm 1/4W
R657	06S70072F05	10 ohm 1/4W
R701	06S64995F77	10K ohm
R702	06S64995F77	10K ohm
R703	06S64995F77	10K ohm
R704	06S64995F84	20K ohm
R705	06S64995F70	5.1K ohm
R706	06S64995F64	3K ohm
R707	06S70072F82	3.3 ohm 1/4W
R708	06S70072F82	3.3 ohm 1/4W
R709	06S64995F72	6.2K ohm
R710	06S70072F90	1 ohm 1/4W
R711	06S70072F81	3 ohm 1/4W
R712	06S64995F77	10K ohm
R713	06T15443W68	4.3K ohm
R714	06T15443W69	4.7K ohm
R715	06T15443W68	4.3K ohm
R716	06T15443W72	6.2K ohm
R717	06S64995F53	1K ohm
R718	06S64995F94	51K ohm
R719	06T15443W70	5.1K ohm
R720	06T15443W70	5.1K ohm
R721	06T15443W61	2.2K ohm
R801	06S64995F53	1K ohm
R802	06T15443W83	18K ohm
R803	06S64995F87	27K ohm
R804	06S64995F87	27K ohm
R805	06S64995F53	1K ohm
R806	06T15443W71	5.6K ohm
R807	06S64995F97	68K ohm
R808	06S64996F04	120K ohm
R809	06S64995F39	270 ohm
R810	06T15443W83	18K ohm
R811	06S70072F02	5.6 ohm 1/4W
R812	06S70072F02	5.6 ohm 1/4W
R813	06T15443W68	4.3K ohm
R814	06S64995F47	560 ohm
R815	06T15443W46	510 ohm
R816	06T15443W47	560 ohm
R817	06T15443W83	18K ohm
R819	06S64996F04	120K ohm
R820	06S64995F90	36K ohm
R823	06T15443W57	1.5K ohm
R824	06T15443W60	2K ohm
R826	06S70072F02	5.6 ohm 1/4W
R827	06S70072F02	5.6 ohm 1/4W
R828	06S70072F02	5.6 ohm 1/4W

Symbol No.	Part No.	Description
R829	06S70072F02	5.6 ohm 1/4W
R830	06T15444W20	560K ohm
R831	06S64995F77	10K ohm
R832	06S64995F93	47K ohm
R851	06S64995F97	68K ohm
R852	06S64995F73	6.8K ohm
R901	06S64995F89	33K ohm
R902	06S64995F77	10K ohm
R903	06S64995F83	18K ohm
R904	06S64995F75	8.2K ohm
R905	06S64995F89	33K ohm
R906	06S64995F89	33K ohm
R907	06S64995F89	33K ohm
R908	06S64995F87	27K ohm
R909	06S64995F89	33K ohm
R910	06S64995F80	13K ohm
R911	06S64995F77	10K ohm
R912	06S64995F87	27K ohm
R920	06S64995F55	1.2K ohm
R921	06S64995F55	1.2K ohm
R922	06S64995F29	100 ohm
R923	06S64995F29	100 ohm
R924	06S64995F29	100 ohm
R925	06S64995F93	47K ohm
R926	06S64996F18	470K ohm
R927	06S64995F53	1K ohm
R928	06S64995F81	15K ohm
R929	06S64995F81	15K ohm
R931	06S64995F91	39K ohm
R932	06S64995F93	47K ohm
R933	06S64995F89	33K ohm
R936	06S64995F90	36K ohm
R937	06S64995F77	10K ohm
R938	06S64995F77	10K ohm
R940	06S64995F87	27K ohm
R941	06S64995F81	15K ohm
R942	06S64995F89	33K ohm
R943	06S64995F47	560 ohm
R944	06S64995F29	100 ohm
R945	06S64995F29	100 ohm
R946	06S64995F29	100 ohm
R947	06S64996F22	680K ohm
R948	06T15443W83	18K ohm
R949	06S64995F77	10K ohm
R950	06S64996F14	330K ohm
R951	06S64995F75	8.2K ohm
R952	06S64995F71	5.6K ohm
R953	06S64995F49	680 ohm
R954	06S64995F61	2.2K ohm

Symbol No.	Part No.	Description
C925	08T81833F03	CP., 1μF
C926	08S65128F67	CP., 6800pF
C927	08S65128F69	CP., 0.01μF
C928	08S82122F11	CP., 8pF
C929	08S82122F11	CP., 8pF
C930	08S65128F69	CP., 0.01μF
C931	08S82122F57	CP., 680pF
C932	08S65128F69	CP., 0.01μF
C933	08S65128F74	CP., 0.047μF
C934	08S65128F69	CP., 0.01μF
C935	08S82122F35	CP., 82pF
C936	08S65128F69	CP., 0.01μF
C937	08S65128F76	CP., 0.1μF
C938	08S65128F69	CP., 0.01μF
C939	08S65128F69	CP., 0.01μF
C940	08S65128F69	CP., 0.01μF
C941	08S82122F31	CP., 56pF
Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R301	06S64995F77	10K ohm
R302	06S64995F75	8.2K ohm
R303	06S64995F77	10K ohm
R304	06T15443W77	10K ohm
R305	06T15443W84	20K ohm
R306	06S70072F05	10 ohm 1/4W
R307	06S70072F05	10 ohm 1/4W
R308	06S64995F57	1.5K ohm
R309	06S64995F57	1.5K ohm
R310	06S64995F77	10K ohm
R311	06S64995F78	11K ohm
R312	06S64995F77	10K ohm
R351	06S64995F29	100 ohm
R352	06S64995F61	2.2K ohm
R353	06S64995F85	22K ohm
R354	06S64995F45	470 ohm
R355	06S64995F13	22 ohm
R356	06S64995F13	22 ohm
R357	06S64995F29	100 ohm
R358	06S64995F59	1.8K ohm
R359	06S64995F45	470 ohm
R360	06S64995F53	1K ohm
R501	06S64996F10	220K ohm
R502	06S64995F61	2.2K ohm
R503	06S70072F45	470 ohm 1/4W
R504	06S70072F45	470 ohm 1/4W
R505	06S64995F05	10 ohm
R506	06S64995F29	100 ohm

Symbol No.	Part No.	Description
R508	06T15443W92	43K ohm
R509	06T15443W89	33K ohm
R510	06T15443W67	3.9K ohm
R511	06T15443W42	360 ohm
R513	06T15443W73	6.8K ohm
R514	06S64995F91	39K ohm
R517	06T15443W73	6.8K ohm
R518	06T15443W89	33K ohm
R519	06S64995F77	10K ohm
R520	06S64995F97	68K ohm
R551	06S64995F69	4.7K ohm
R552	06S64995F69	4.7K ohm
R553	06S64995F69	4.7K ohm
R554	06S64995F64	3K ohm
R555	06S70072F50	750 ohm 1/4W
R556	06S70072F50	750 ohm 1/4W
R557	06S70072F50	750 ohm 1/4W
R558	06S70072F50	750 ohm 1/4W
R601	06S64995F77	10K ohm
R602	06S64995F93	47K ohm
R603	06S64995F65	3.3K ohm
R604	06S64995F60	2K ohm
R605	06S64995F94	51K ohm
R606	06S64995F94	51K ohm
R609	06S64995F93	47K ohm
R610	06S64995F53	1K ohm
R611	06S64995F93	47K ohm
R612	06S64995F93	47K ohm
R613	06S64995F70	5.1K ohm
R614	06S70072F53	1K ohm 1/4W
R615	06S64995F93	47K ohm
R616	06S64995F93	47K ohm
R617	06S64995F93	47K ohm
R618	06S64995F93	47K ohm
R619	06S64995F53	1K ohm
R620	06S64995F53	1K ohm
R622	06S64995F77	10K ohm
R623	06S64995F53	1K ohm
R625	06S64995F53	1K ohm
R633	06S64995F53	1K ohm
R637	06S70072F57	1.5K ohm 1/4W
R645	06S70072F07	12 ohm 1/4W
R646	06S70072F07	12 ohm 1/4W
R647	06S70072F03	6.8 ohm 1/4W
R648	06S64995F77	10K ohm
R650	06S64995F53	1K ohm
R651	06S70072F03	6.8 ohm 1/4W
R652	06S70072F86	5.1 ohm 1/4W
R653	06S70072F86	5.1 ohm 1/4W

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Symbol No.	Part No.	Description
SW4010	40T55656W04	Tact, CP. SKQMAM (SET UP)
SW4011	40T55656W04	Tact, CP. SKQMAM (V.SEL)
SW4012	40T55656W04	Tact, CP. SKQMAM (UP)
SW4013	40T55656W04	Tact, CP. SKQMAM (DOWN)
Filters		
Z4001	91T75114W03	EMI, CP. EXCCET101U
Z4002	91T75114W03	EMI, CP. EXCCET101U
Z4003	91T75114W03	EMI, CP. EXCCET101U
Z4011	91T75198W05	EMI, CP. NFM61R30T472T
Z4012	91T75198W05	EMI, CP. NFM61R30T472T
Z4013	91T75198W05	EMI, CP. NFM61R30T472T
Z4014	91T75198W05	EMI, CP. NFM61R30T472T
Coils		
L4101	24T75195W26	Inductor, CP. 1µH
L4301	24T16403W11	Inductor, CP. 0.47µH
L4302	24T75195W50	Inductor, CP. 100µH
L4304	24T75195W38	Inductor, CP. 10µH
L4314	24T75195W38	Inductor, CP. 10µH
Lamps / LED's		
PL1	65T75233W01	CP., 6V-80mA
PL2	65T75233W01	CP., 6V-80mA
PL3	65T75233W01	CP., 6V-80mA
PL4	65T75233W01	CP., 6V-80mA
LD4001	48T84017F02	LED, CP. BG1102WTR (GRN)
LD4002	48T84017F17	LED, CP. AY1102WTR (YEL)
Crystals		
XL4101	91T45433W73	CP., 12MHz
XL4201	91T45433W12	CP., 4MHz
Thermistor		
TH4364	48T85351W04	CP., 22K ohm
Capacitors		
C4001	08S35374W01	CP., 0.1µF

Symbol No.	Part No.	Description
E4001	23S65134W13	CP. ELY., 100µF / 6.3V
C4002	08S35374W01	CP., 0.1µF
E4002	23S65134W12	CP. ELY., 47µF / 6.3V
C4003	08S35374W01	CP., 0.1µF
C4005	08S35374W01	CP., 0.1µF
C4007	08S35374W01	CP., 0.1µF
C4021	08S82122F61	CP., 1000pF
C4022	08S82122F61	CP., 1000pF
C4023	08S82122F61	CP., 1000pF
C4101	08S35374W01	CP., 0.1µF
E4101	23S65134W13	CP. ELY., 100µF / 6.3V
C4102	08S35374W01	CP., 0.1µF
E4102	23S65134W13	CP. ELY., 100µF / 6.3V
C4103	08S35374W01	CP., 0.1µF
E4103	23S65134W13	CP. ELY., 100µF / 6.3V
C4104	08S35374W01	CP., 0.1µF
E4104	23S65134W13	CP. ELY., 100µF / 6.3V
C4105	08S82122F17	CP., 15pF
C4106	08S82122F17	CP., 15pF
C4108	08S35374W01	CP., 0.1µF
C4111	08S35374W01	CP., 0.1µF
C4112	08S35374W01	CP., 0.1µF
C4113	08S65128F61	CP., 2200pF
C4114	08S65128F61	CP., 2200pF
C4115	08S65128F61	CP., 2200pF
C4116	08S65128F61	CP., 2200pF
C4117	08S65128F61	CP., 2200pF
C4118	08T81833F03	CP., 1µF
C4119	08S65128F61	CP., 2200pF
C4120	08S65128F61	CP., 2200pF
C4161	08S35374W01	CP., 0.1µF
E4161	23S65134W62	CP. ELY., 0.22µF / 50V
C4162	08S65128F61	CP., 2200pF
C4201	08S35374W01	CP., 0.1µF
E4201	23S65134W13	CP. ELY., 100µF / 6.3V
C4202	08S82122F23	CP., 27pF
E4202	23S65134W31	CP. ELY., 10µF / 16V
C4203	08S82122F23	CP., 27pF
E4203	23S65134W31	CP. ELY., 10µF / 16V
C4204	08S35374W01	CP., 0.1µF
C4205	08S82122F61	CP., 1000pF
C4206	08S35374W01	CP., 0.1µF
C4207	08S35374W01	CP., 0.1µF
C4208	08S35374W01	CP., 0.1µF
C4209	08T15399W02	CP., 0.033µF
E4209	23S65134W13	CP. ELY., 100µF / 6.3V
C4210	08S35374W01	CP., 0.1µF
C4211	08S65128F35	CP., 100pF
C4301	08S35374W01	CP., 0.1µF

Symbol No.	Part No.	Description
R955	06S64995F26	75 ohm
R956	06S64995F53	1K ohm
R957	06S64995F55	1.2K ohm
R960	06S64996F38	10M ohm
R961	06S64995F41	330 ohm
R962	06S64995F77	10K ohm
R963	06S64995F74	7.5K ohm
R964	06S64995F85	22K ohm
R966	06S64995F73	6.8K ohm
R967	06S64996F26	1M ohm
R968	06S64995F71	5.6K ohm
R969	06S64995F57	1.5K ohm
R970	06S64995F77	10K ohm
R971	06S64995F85	22K ohm
R973	06S64996F22	680K ohm
R974	06S64996F33	3.9M ohm
R975	06S64995F69	4.7K ohm
R978	06S64995F78	11K ohm
VR301	18T55283W09	Variable, CP. 2.2K ohm
VR902	18T55283W14	Variable, CP. 15K ohm
VR903	18T55283W14	Variable, CP. 15K ohm
VR904	18T55283W14	Variable, CP. 15K ohm
VR906	18T55283W14	Variable, CP. 15K ohm
VR907	18T55283W14	Variable, CP. 15K ohm
VR908	18T55283W14	Variable, CP. 15K ohm
VR911	18T55283W14	Variable, CP. 15K ohm

VDP P.W.Board

IC's

IC4001	51T45178W02	TC4W53F
IC4002	51T45178W02	TC4W53F
IC4003	51T55639W02	RS-51
IC4004	51T95040W01	SBX8035F
IC4005	51T15731W08	TC7S08F
IC4101	51T95286W01	95286W01
IC4104	51T85444W01	CXK581000AM
IC4105	51T15015Y10	15015Y10
IC4161	51T96065F02	M51957BFP
IC4201	51T55070W04	MB88385APF
IC4202	51T55353W06	TC7W14F
IC4203	51T93332F01	NJM2903M
IC4204	51T25370W01	MC14538BFEL
IC4301	51T95182W01	MC74HC4053FEL
IC4302	51T15731W10	TC7S66F
IC4303	51T95183W01	MC74HC4538AFEL
IC4304	51T95181W01	MC4044MEL
IC4305	51T95184W01	MC74F04MEL
IC4306	51T95185W01	SN74LS74AMEL
IC4307	51T45178W02	TC4W53F
IC4308	51T55353W02	TC7W04F
IC4309	51T65336W01	YGV606
IC4310	51T15731W04	TC7S32F
IC4311	51T15731W04	TC7S32F
IC4314	51T65393W04	HM514400CSI
IC4315	51T65393W04	HM514400CSI
IC4401	51T35479W03	µPD6325G

Transistors

Q4001	48T62967F03	CP., DTC124K
Q4002	48T62967F03	CP., DTC124K
Q4003	48T62967F04	CP., DTC144K
Q4004	48T62967F04	CP., DTC144K
Q4051	48T63417F01	CP., 2SC2412K
Q4052	48T62967F04	CP., DTC144K
Q4101	48T62967F04	CP., DTC144K
Q4201	48T62967F08	CP., DTC144WK
Q4202	48T62967F03	CP., DTC124K
Q4203	48T62966F03	CP., DTA124

Diodes

D4007	48T81063F01	CP., MA159
D4008	48T81063F01	CP., MA159
D4104	48T25651W02	CP., MA152WK
D4201	48T25651W02	CP., MA152WK
VD4302	48T95186W01	Varactor, CP. HVU358
ZD4201	48T85306W06	Zener, CP. MA5075
ZD4202	48T85306W06	Zener, CP. MA5075

Switches

SW4001	40T55656W07	Tact, CP. SKQMAK (F1)
SW4002	40T55656W07	Tact, CP. SKQMAK (F2)
SW4003	40T55656W07	Tact, CP. SKQMAK (F3)
SW4004	40T55656W07	Tact, CP. SKQMAK (F4)
SW4005	40T55656W07	Tact, CP. SKQMAK (F5)
SW4006	40T55656W07	Tact, CP. SKQMAK (F6)
SW4007	40T55656W07	Tact, CP. SKQMAK (NEXT)
SW4008	40T55656W04	Tact, CP. SKQMAM (FUNC)
SW4009	40T55656W04	Tact, CP. SKQMAM (SOURCE)

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Symbol No.	Part No.	Description
R4147	06S64996F02	100K ohm
R4148	06S64995F79	12K ohm
R4161	06T15443W69	4.7K ohm
R4162	06T15443W69	4.7K ohm
R4163	06T15443W79	12K ohm
R4164	06T15443W79	12K ohm
R4165	06S64995F53	1K ohm
R4201	06S64995F57	1.5K ohm
R4202	06S64995F61	2.2K ohm
R4203	06S64995F61	2.2K ohm
R4204	06S64995F57	1.5K ohm
R4205	06S70072F19	39 ohm 1/4W
R4206	06S70072F19	39 ohm 1/4W
R4207	06S70072F19	39 ohm 1/4W
R4208	06S70072F19	39 ohm 1/4W
R4209	06S64995F93	47K ohm
R4210	06S64995F69	4.7K ohm
R4211	06S64995F93	47K ohm
R4212	06S64995F77	10K ohm
R4213	06S64995F93	47K ohm
R4214	06S64995F93	47K ohm
R4215	06S64995F77	10K ohm
R4216	06S64995F77	10K ohm
R4217	06S64995F77	10K ohm
R4218	06S64995F81	15K ohm
R4219	06S64995F77	10K ohm
R4220	06S64995F87	27K ohm
R4221	06S64995F75	8.2K ohm
R4222	06S64996F26	1M ohm
R4223	06S64996F14	330K ohm
R4224	06S64996F18	470K ohm
R4225	06S70072F05	10 ohm 1/4W
R4301	06S64995F29	100 ohm
R4303	06S64995F29	100 ohm
R4304	06S64995F29	100 ohm
R4305	06S64995F29	100 ohm
R4306	06S64995F29	100 ohm
R4307	06S64995F29	100 ohm
R4333	06S64995F65	3.3K ohm
R4334	06S64995F73	6.8K ohm
R4335	06S64995F53	1K ohm
R4336	06S64995F53	1K ohm
R4337	06S64995F88	30K ohm
R4338	06S64995F61	2.2K ohm
R4339	06S64996F02	100K ohm
R4340	06S64995F41	330 ohm
R4341	06S64995F41	330 ohm
R4342	06S64995F77	10K ohm
R4343	06S64995F35	180 ohm

Symbol No.	Part No.	Description
R4344	06S64995F35	180 ohm
R4345	06S64995F35	180 ohm
R4346	06S64995F41	330 ohm
R4347	06S64995F41	330 ohm
R4348	06S64995F39	270 ohm
R4349	06S64995F29	100 ohm
R4350	06S64995F29	100 ohm
R4351	06S64995F29	100 ohm
R4352	06S64995F29	100 ohm
R4353	06S64995F29	100 ohm
R4354	06S64995F29	100 ohm
R4355	06S64995F77	10K ohm
R4356	06S64995F77	10K ohm
R4361	06S64995F63	2.7K ohm
R4363	06S64995F78	11K ohm
R4365	06S64995F29	100 ohm
R4366	06S64995F29	100 ohm
R4367	06S64995F29	100 ohm
R4368	06S64995F29	100 ohm
RA4101	06T45591W07	Block, CP. 100 ohm X 4
RA4102	06T45591W07	Block, CP. 100 ohm X 4
RA4104	06T45591W06	Block, CP. 1K ohm X 4
RA4105	06T45591W06	Block, CP. 1K ohm X 4
RA4106	06T45591W07	Block, CP. 100 ohm X 4
RA4108	06T45591W07	Block, CP. 100 ohm X 4
RA4109	06T45591W07	Block, CP. 100 ohm X 4
RA4110	06T45591W05	Block, CP. 51 ohm X 4
RA4111	06T45591W05	Block, CP. 51 ohm X 4
RA4112	06T45591W07	Block, CP. 100 ohm X 4
RA4113	06T45591W07	Block, CP. 100 ohm X 4
RA4114	06T45591W05	Block, CP. 51 ohm X 4
RA4115	06T45591W05	Block, CP. 51 ohm X 4
RA4116	06T45591W05	Block, CP. 51 ohm X 4
RA4117	06T45591W05	Block, CP. 51 ohm X 4
RA4118	06T45591W05	Block, CP. 51 ohm X 4
RA4120	06T45591W07	Block, CP. 100 ohm X 4
RA4121	06T45591W07	Block, CP. 100 ohm X 4
RA4122	06T45591W07	Block, CP. 100 ohm X 4
RA4123	06T45591W07	Block, CP. 100 ohm X 4
VR4302	18T45357W10	Variable, CP. 3.3K ohm
VR4303	18T45357W01	Variable, CP. 100 ohm

Symbol No.	Part No.	Description
E4301	23S65134W13	CP. ELY., 100μF / 6.3V
C4302	08S35374W01	CP., 0.1μF
E4302	23S65134W13	CP. ELY., 100μF / 6.3V
C4303	08S35374W01	CP., 0.1μF
C4304	08S35374W01	CP., 0.1μF
C4306	08S35374W01	CP., 0.1μF
C4307	08S35374W01	CP., 0.1μF
C4308	08S82122F37	CP., 100pF
C4309	08S82122F37	CP., 100pF
C4310	08S35374W01	CP., 0.1μF
C4311	08S65128F65	CP., 4700pF
C4312	08T65289W04	CP., 0.33μF
C4313	08S65128F69	CP., 0.01μF
C4314	08S82122F53	CP., 470pF
C4315	08S74223F06	CP., 8pF
E4315	23S65134W12	CP. ELY., 47μF / 6.3V
C4316	08S65128F57	CP., 1000pF
C4317	08S35374W01	CP., 0.1μF
C4318	08S35374W01	CP., 0.1μF
C4319	08S35374W01	CP., 0.1μF
C4320	08S35374W01	CP., 0.1μF
C4324	08S35374W01	CP., 0.1μF
C4325	08S35374W01	CP., 0.1μF
C4326	08S35374W01	CP., 0.1μF
C4327	08S35374W01	CP., 0.1μF
C4328	08S35374W01	CP., 0.1μF
C4329	08S35374W01	CP., 0.1μF
C4330	08S35374W01	CP., 0.1μF
C4333	08S35374W01	CP., 0.1μF
C4334	08S35374W01	CP., 0.1μF
C4335	08T65289W04	CP., 0.33μF
C4361	08S35374W01	CP., 0.1μF
C4401	08S35374W01	CP., 0.1μF
E4401	23S65134W31	CP. ELY., 10μF / 16V
VC4301	20T90477F01	Trimmer, CP. 6pF

Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R4001	06S70072F39	270 ohm 1/4W
R4002	06S70072F39	270 ohm 1/4W
R4014	06S64995F69	4.7K ohm
R4015	06S64995F93	47K ohm
R4016	06S64995F93	47K ohm
R4017	06S64995F93	47K ohm
R4018	06S64995F93	47K ohm
R4019	06S64995F93	47K ohm
R4020	06S64995F93	47K ohm
R4021	06S64995F93	47K ohm

Symbol No.	Part No.	Description
R4024	06S70072F21	47 ohm 1/4W
R4031	06S64995F29	100 ohm
R4032	06S64995F29	100 ohm
R4034	06S64995F29	100 ohm
R4039	06S64995F53	1K ohm
R4040	06S64995F53	1K ohm
R4041	06S64995F29	100 ohm
R4042	06S64995F29	100 ohm
R4043	06S64995F29	100 ohm
R4051	06S64996F02	100K ohm
R4052	06S64995F93	47K ohm
R4054	06S64995F93	47K ohm
R4055	06S64995F93	47K ohm
R4101	06S64995F29	100 ohm
R4102	06S64995F29	100 ohm
R4104	06S64995F29	100 ohm
R4105	06S64995F29	100 ohm
R4106	06S64995F29	100 ohm
R4107	06S64995F29	100 ohm
R4108	06S64995F29	100 ohm
R4109	06S64995F29	100 ohm
R4110	06S64995F29	100 ohm
R4111	06S64995F53	1K ohm
R4112	06S64995F77	10K ohm
R4113	06S64995F77	10K ohm
R4114	06S64995F29	100 ohm
R4115	06S64995F29	100 ohm
R4116	06S64995F77	10K ohm
R4117	06S64995F29	100 ohm
R4118	06S64995F29	100 ohm
R4119	06S64995F77	10K ohm
R4123	06S64995F77	10K ohm
R4124	06S64995F77	10K ohm
R4128	06S64995F29	100 ohm
R4129	06S64995F29	100 ohm
R4130	06S64995F29	100 ohm
R4131	06S64995F29	100 ohm
R4132	06S64995F29	100 ohm
R4133	06S64995F53	1K ohm
R4134	06S64996F02	100K ohm
R4135	06S64996F02	100K ohm
R4136	06S64996F02	100K ohm
R4138	06S64995F22	51 ohm
R4141	06S64995F93	47K ohm
R4142	06S64996F02	100K ohm
R4143	06S64996F02	100K ohm
R4144	06S64996F02	100K ohm
R4145	06S64996F02	100K ohm
R4146	06S64996F02	100K ohm

Symbol No.	Part No.	Description
Rear P.W.Board		
Transistors		
Q001	48T15511W02	CP., 2SB1261
Q002	48T35586W01	CP., 2SC3518
Q003	48T94853F05	CP., DTD113EK
Q004	48T62967F02	CP., DTC114K
Q005	48T62967F02	CP., DTC114K
Q006	48T63417F01	CP., 2SC2412K
Diodes		
D001	48T68580F03	DSA3A4
D003	48T74692F02	CP., MA291
D004	48T15512W01	CP., DSM10
D005	48T15512W01	CP., DSM10
ZD001	48T55160W01	Zener, ZSA5A27
ZD002	48T85306W10	Zener, CP. MA5110
ZD003	48T84735F11	Zener, CP. MA3062-M
ZD004	48T84735F11	Zener, CP. MA3062-M
ZD005	48T84735F07	Zener, CP. MA3056-L
ZD006	48T84735F07	Zener, CP. MA3056-L
ZD007	48T84735F07	Zener, CP. MA3056-L
ZD008	48T84735F07	Zener, CP. MA3056-L
ZD009	48T84735F07	Zener, CP. MA3056-L
Fuses		
F001	65T85352W15	CP., 1A
F002	65T85352W15	CP., 1A
F003	65T85352W16	CP., 1.25A
Filters		
Z001	91T75198W05	EMI, CP. NFM61R30T472T
Z002	91T75198W05	EMI, CP. NFM61R30T472T
Z003	91T75198W05	EMI, CP. NFM61R30T472T
Z004	91T75198W05	EMI, CP. NFM61R30T472T
Z005	91T75198W05	EMI, CP. NFM61R30T472T
Z006	91T75198W05	EMI, CP. NFM61R30T472T
Z007	91T75198W05	EMI, CP. NFM61R30T472T
Z008	91T75198W05	EMI, CP. NFM61R30T472T
Z009	91T75198W05	EMI, CP. NFM61R30T472T
Z010	91T75198W03	EMI, CP. NFM61R00T361T
Z011	91T75198W03	EMI, CP. NFM61R00T361T

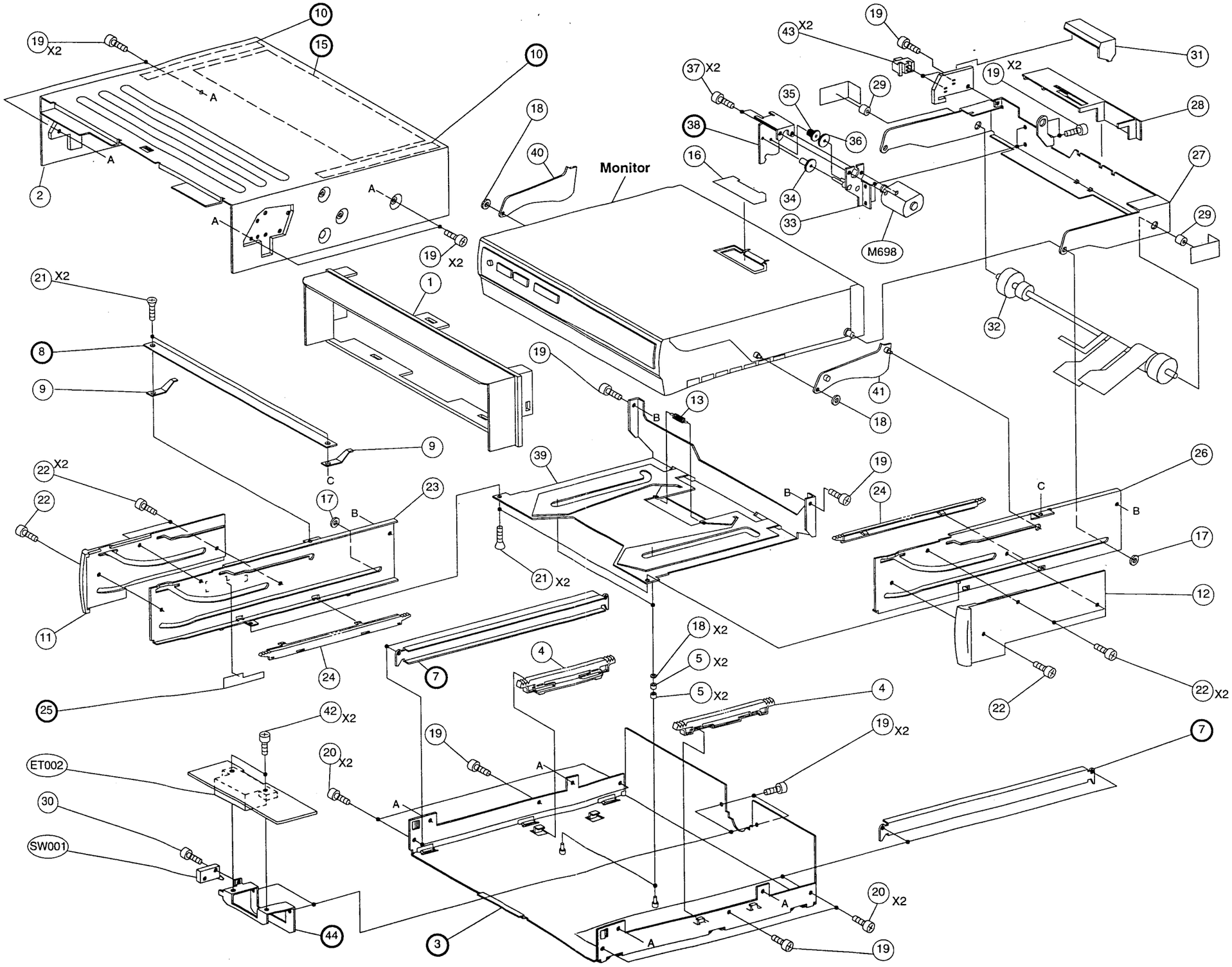
Symbol No.	Part No.	Description
Capacitors		
C001	08S65128F76	CP., 0.1µF
E001	23T75480W38	ELY., 470µF / 16V
C002	08S65128F76	CP., 0.1µF
C003	08S65128F76	CP., 0.1µF
E003	23S65134W34	CP. ELY., 47µF / 16V
C004	08S65128F76	CP., 0.1µF
E004	23S65134W47	CP. ELY., 100µF / 25V
E005	23S65134W34	CP. ELY., 47µF / 16V
E006	23T25191W30	CP. ELY., 1µF / 50V
Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R002	06S64995F93	47K ohm
R003	06S64995F93	47K ohm
R004	06S64995F53	1K ohm
R005	06S64995F53	1K ohm
R006	06S64995F53	1K ohm
R007	06S64996F02	100K ohm
R008	06S64996F02	100K ohm
R009	06S64996F02	100K ohm
R010	06S70072F53	1K ohm 1/4W
R011	06S64995F53	1K ohm
R012	06S70072F55	1.2K ohm 1/4W
R013	06S70072F55	1.2K ohm 1/4W
R014	06S70072F53	1K ohm 1/4W
R015	06S70072F77	10K ohm 1/4W
R016	06S70072F59	1.8K ohm 1/4W
R017	06S70072F59	1.8K ohm 1/4W
R018	06S70072F59	1.8K ohm 1/4W
R019	06S70072F59	1.8K ohm 1/4W
R020	06S70072F38	240 ohm 1/4W
Sensor P.W.Board		
Photo Sensors		
PT698	51T15144W01	ON2170-R
PT699	51T15144W01	ON2170-R
Capacitor		
C699	08S65128F76	CP., 0.1µF

Symbol No.	Part No.	Description
Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R697	06S64995F87	27K ohm
R698	06S64995F36	200 ohm
R699	06S64995F87	27K ohm
Miscellaneous		
ET002	09T25321W20	20P Connector
LCD901	01T95344W01	Assy., LCD Unit (LQ6BW20C)
M698	01V61100W02	Assy., Motor (10V)
SW001	40T41665F01	Switch, Slide (INDASH OPEN / CLOSE DETECTOR)
VR4020, SW4020	18T95143W01	Volume, Rotary Encoder

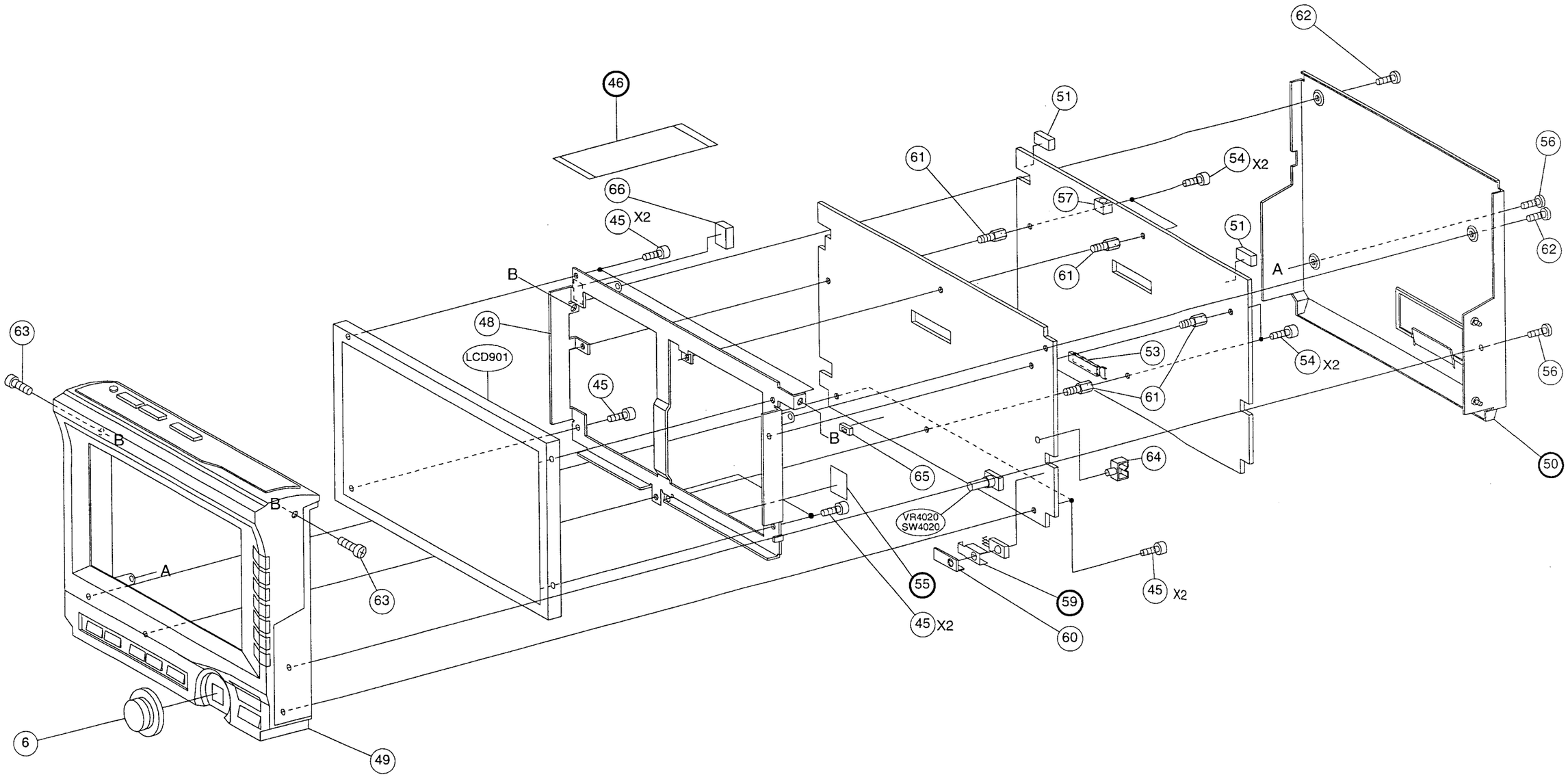
Symbol No.	Part No.	Description

CVA-1000R

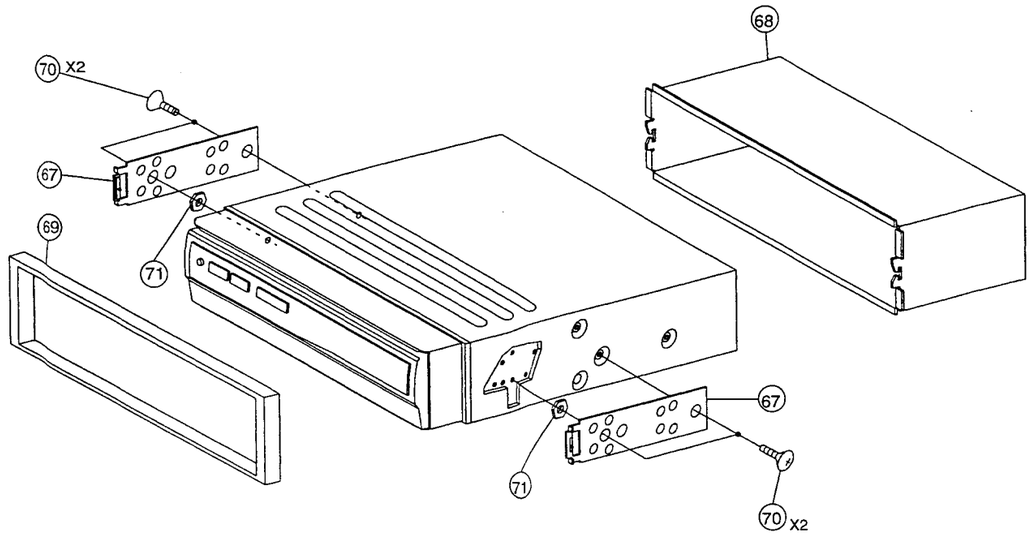
Exploded View (Shuttle / Monitor) (1/3)



Exploded View (Shuttle / Monitor) (2/3)



Exploded View (Shuttle / Monitor) (3/3)



Cabinet Assembly Parts List

NOTE:Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description
1		13C90799W02	Nosepiece
2		15C51441W01	Cover, Top
4		44A51469W01	Rack, Bottom
5		49A60148W01	Roller, Bottom
6		36B90587W02	Knob, Rotary
9		41A60239W01	Spring, Top
11		15C91248W02	Cover, Side (L)
12		15C91249W02	Cover, Side (R)
13		41A51494W02	Spring, Lock
16		15A81228W02	Cover, FPC
17		04B41345P51	Washer, Lock (M2.6)
18		04B41345P50	Washer, Lock (M1.7)
19		03S38013W20	Screw, Pan (M2.6X3)
20		03S94385F45	Screw, Nylok Pan (M2.6X4)
21		03S94385F14	Screw, Nylok Countersink (M2.6X3)
22		03S94385F44	Screw, Nylok Pan (M2X2)
23		01B70936W01	Assy., Riv. Inner (L)
24		44A51468W01	Rack, Inner
26		01B70937W01	Assy., Riv. Inner (R)
27		01B51488W01	Assy., Riv. Bracket Drive
28		15B51474W01	Cover, FPC
29		43A60687W01	Bush, Drive
30		03S38013W10	Screw, Tapping (M2X7)
31		15B60583W01	Cover, Motor
32		01V53700W58	Assy., Drive Shaft (Included Flexible P.W.Board)
33		01A51489W01	Assy., Riv. Bracket Motor
34		01A51506W01	Assy., Gear Clutch
35		44A51470W01	Gear, Drive (A)
36		44A10141W02	Gear, Ej Idler (B)
37		03S94385F08	Screw, Nylok Pan (M2X3)
39		01B51485W02	Assy., Riv. Inner (B)
40		01A51486W03	Assy., Riv. Link (L)
41		01A51487W03	Assy., Riv. Link (R)
42		03S38013W19	Screw, Tapping (M2.3X10)
43		15B11065W01	Guide, Photo
45		03S70494F21	Screw, Pan (M2.6X5)
48		07C90586W01	Bracket, LCD
49		15C10339Y01	Assy., Case Surface
51		75S81015W36	Cushion, Rubber
53		75S81015W13	Cushion, Rubber
54		03S44205G48	Screw, Pan (M2.6X5)
56		03S70494F30	Screw, Flat (M2.6X8)
57		43A90583W01	Holder, LED
60		75A91358W01	Cushion, Remote
61		46A90588W01	Shaft, Screw
62		03S94385F61	Screw, Nylok Pan (M2.6X8)
63		03S68259F33	Screw, Flat (M2X5)
64		15T92365F01	Wire, Clamp
65		75A91359W01	Cushion, LED
66		75S81015W35	Cushion, Rubber
67		07T75070W01	Assy., Bracket Stopper
68		15D80814F01	Case, Inner
69		33T95187W02	Face, Plate
70		03S72235F68	Screw, Countersink (M5X6)
71		02S40000G15	Nut, Hex. (M9)